SONY

EDITING CONTROL UNIT

BVE-2000

EDITING KEYBOARD

BKE-2010

EXPANDED RS-422 INTERFACE BOARD

BKE-2020

NTSC COLOR FRAMING DETECTOR

BKE-2030

PAL COLOR FRAMING DETECTOR

BKE-2031



OPERATION AND MAINTENANCE MANUAL Part 2 1st Edition Serial No. 10001 and Higher

For the customers in the U.S.A.

WARNING

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC rules.

For the customers in Canada

This apparatus complies with the Class A limits for radio noise emissions set out in Radio Interference Regulations.

Pour les utilisateurs au Canada

Cet appareil est conforme aux normes Classe A pour bruits radioélectriques, spécifiés dans le Règlement sur le brouillage radioélectrique.

Bescheinigung des Herstellers

Hiermit wird bescheinigt, daß die Schnitt-Steuereinheit BVE-2000 in Übereinstimmung mit den Bestimmungen der BMPT-Amtsblatt Vfg 243/1991 und Vfg 46/1992 funkenstört ist. Der vorschriftsmäßige Betrieb mancher Geräte (z.B.Meßsender) kann allerdings gewissen Einschränkungen unterliegen. Beachten Sie deshalb die Hinweise in der Bedienungsanleitung. Dem Bundesamt für Zulassungen in der Telekommunikation wurde das inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

Sony Deutschland GmbH Hugo Eckener Str. 20 D-5000 Köln 30

Hinweis

Gemäß der Amtsblätter des BMPT Nm. 61/1991 und 6/1992 wird der Betreiber darauf aufmerksam gemacht, daß die von ihm mit diesem Gerät zusammengestellte Anlage auch den technischen Bestimmungen dieser Amtsblätter genügen muß.

SAFETY CHECK-OUT

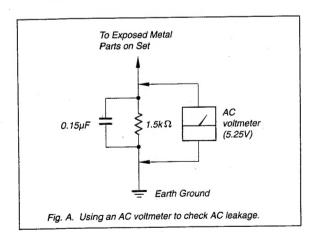
After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

Check the metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 3.5mA. Leakage current can be measured by any one of three methods.

- A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
- A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
- 3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 5.25V so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 20V AC range are suitable. (See Fig. A)



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このマニュアルについて

本書の目的

本書は、エディティングコントロールユニット BVE-2000とその別売りアクセサリのBKEシリーズのオペレーション・アンド・メンテナンスマニュアルパート 2です。本書では、サービスエンジニアの方々にご使用していただくことを想定し、本機の部品レベルまでのサービスを前提とした情報(調整要項、回路図、マウント図、詳細パーツリスト等)を記載しています。

構成

本書全体の構成を把握していただくために、全章の概略を以下に説明します。

オペレーション・アンド・メンテナンスマニュアルパート2

第1章/SEC.1 電気調整要項/ELECTRICAL ALIGNMENT

プリント基板内の部品交換をした場合などで、基板を調整する必要が生じた場合の調整方法を説明しています。

SEC. 2 SCHEMATIC DIAGRAMS

全プリント基板の回路図を概ね、スロットの順番で掲載しています。マザー基板とフレーム回路 図は、本章の最後の部分にあります。

SEC. 3 BOARD LAYOUTS

全プリント基板のパターンとシンボル図を、回路図と概ね同じ順で掲載しています。

SEC. 4 SEMICONDUCTOR PIN ASSIGNMENTS

使用半導体の外形およびICについては概略の機能ブロックや、ピン名称を掲載しています。

SEC. 5 SPARE PARTS & OPTIONAL FIXTURES

使用部品のうち、サービス対象に指定されている部品や、必要な工具類などを掲載しています。

オペレーション・アンド・メンテナンスマニュアルパート1

第1章 取扱い操作/SEC.1 OPERATION

第2章 設置/SEC. 2 INSTALLATION

第3章 サービスインフォメーション/SEC.3 SERVICE INFORMATION

第4章 自己診断/SEC. 4 DIAGNOSTIC

SEC. 5 BLOCK DIAGRAMS & FRAME WIRING

SEC. 6 SPARE PARTS AND FIXTURES FOR CUSTOMERS

関連マニュアル

本機にはこの「オペレーション・アンド・メンテナンスマニュアルパート 2」の他に下記のマニュアルが用意されています。

- ・ユーザーガイド(本機に付属しています。)
 - 本機を実際に運用および操作するのに必要なマニュアルです。
- ・オペレーション・アンド・メンテナンスマニュアルパート 1 (本機に付属しています。) 本機の納入設定時に必要な項目、点検および保守に関する情報、主なブロックおよび基板交 換によるサービスを前提とした情報を記載したマニュアルです。

Introducing This Manual

Purpose of this manual

This manual is the operation and maintenance manual Part 2 of the editing control unit BVE-2000 and its optional BKE series accessories.

Intended for service engineers, this manual contains information (alignments, schematic diagrams, board layouts, detailed parts list, etc.) required for servicing the parts of the unit.

Construction

To help you grasp the construction of this manual, summaries of all sections are given below.

Operation And Maintenance Manual Part 2 Section 1. ELECTRICAL ALIGNMENTS

Describes the procedures for adjusting the printed circuit board which are to be carried out when its parts have been replaced, etc.

Section 2. SCHEMATIC DIAGRAMS

Contains the schematic diagrams of all printed circuit boards according to the order of the slots. The schematic diagrams of the mother board and frame are at the end of this section.

Section 3. BOARD LAYOUTS

Provides the printed circuit pattern and their printed symbols of all circuit boards in the same order as the schematic diagrams.

Section 4. SEMICONDUCTOR PIN ASSIGNMENTS

Gives the external view of the used semiconductor, the functional blocks and pin names of the ICs.

Section 5. SPARE PARTS & OPTIONAL FIXTURES

Lists parts which can be serviced, required tools, etc.

Operation and Maintenance Manual Part 1

Section 1. OPERATION

Section 2. INSTALLATION

Section 3. SERVICE INFORMATION

Section 4. DIAGNOSIS

Section 5. BLOCK DIAGRAMS AND FRAME WIRING

Section 6. SPARE PARTS AND FIXTURES FOR CUSTOMERS

Related Manuals

In addition to this Operation and Maintenance Manual Part 2, the following manuals are also available.

- User's Guide (Provided with BVE-2000)
 Manual required for operating the unit.
- Operation and Maintenance Manual Part 1 (Provided with BVE-2000)

This manual gives information on how to set the unit up, inspect and maintain it, and service (mainly replacements of main blocks and boards).

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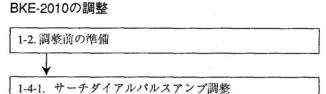
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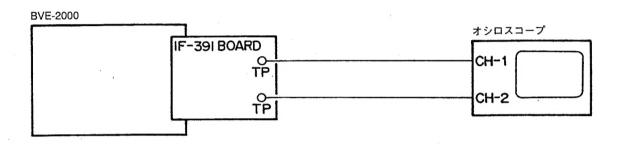




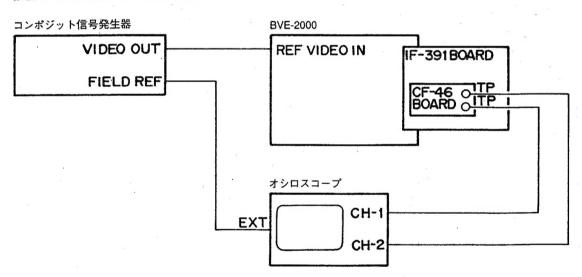
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1-2-1. 機器の接続

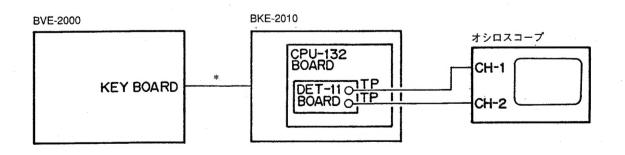
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接続-2: BKE-2030/BKE-2031調整時



接続-3: BKE-2010調整時



^{*:} BKE-2010の付属ケーブル10 m (1-559-650-11)

1-2-2. 治工具/測定器

1. コンポジット信号発生器

相当品: 1410/ソニーテクトロニクス (For NTSC) 1411/ソニーテクトロニクス (For PAL) 1431/ソニーテクトロニクス (For SECAM)

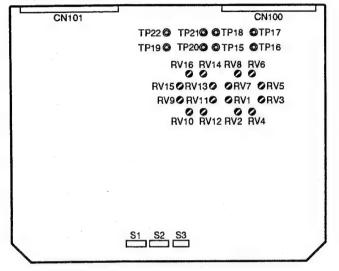
2. オシロスコープ 相当品: 2445または2465/ソニーテクトロニクス

3. 延長基板 (EX-383) ソニー部品番号: J-6187-390-A

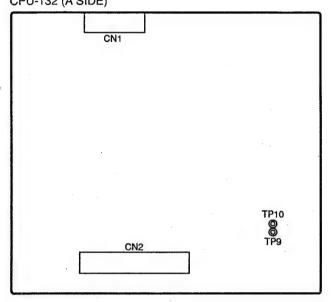
1-2-3. 調整ボリューム配置図

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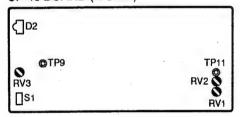
IF-391 BOARD (A SIDE)



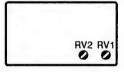
BKE-2010 CPU-132 (A SIDE)



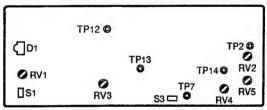
BKE-2030 CF-46 BOARD (A SIDE)



BKE-2010 DET-11 BOARD (A SIDE)



BKE-2031 CF-47 BOARD (A SIDE)



1-3. BVE-2000の調整

1-3-1. オーディオアナログコントロール振幅電圧の調整

調整時の状態	規格	調整箇所
STEP-1 • 接続: 1-2-1項 接続-1 • 延長基板: EX-383基板にてIF-391表 • スイッチの設定: S1/IF-391 (D15) = S2/IF-391 (E15) = S3-1, 2, 3/IF-391 (F15) = S3-4, 5/IF-391 (F15) = S3-4, 5/	ON ON F15) = ON	
STEP-2	テストポイント	VCA-1A 調整 ● RV1/IF-391 (J3) TP15/IF-391 (J1)
		VCA-1B 調整 ● RV3/IF-391 (K3) TP16/IF-391 (J1)
	GND	VCA-1C 調整 ● RV5/IF-391 (K3) TP17/IF-391 (J1)
	$A = 5.0 \pm 0.1 \text{ V dc}$	VCA-1D 調整 ● RV7/IF-391 (J3) TP18/IF-391 (J1)
		VCA-2A 調整 ② RV9/IF-391 (H3) TP19/IF-391 (G1)
		VCA-2B 調整 ● RV11/IF-391 (J3) TP20/IF-391 (H1)
la Salama egi uma a men ^o		VCA-2C 調整 ● RV13/IF-391 (J3) TP21/IF-391 (H1)
・オシロスコープ CH-1: 1 mS/DIV 1 V/DIV TRIG: CH-1	◆ 上記の規格になるように、各TPを確認しながら、 RV1, 3, 5, 7, 9, 11, 13, 15を調整する。	VCA-2D 調整 ● RV15/IF-391 (H3) TP22/IF-391 (G1)
STEP-3 • 調整終了後は必ず、IF-391基板のS	3-4,5の設定をONにもどす。	

1-3-2. オーディオアナログコントロール OFF SET 電圧の調整

調整時の状態	規格	調整箇所
STEP-1 • 接続: 1-2-1項 接続-1 • 延長基板: EX-383基板にてIF-391基 • スイッチの設定: S1/IF-391 (D15) = C S2/IF-391 (E15) = C S3-1, 2, 3/IF-391 (F15)	ON ON 15) = ON	
STEP-2	テストポイント	VCA-1A 調整 ● RV2/IF-391 (J5) TP15/IF-391 (J1)
•		VCA-1B 調整 ● RV4/IF-391 (K5) TP16/IF-391 (J1)
	B GND	VCA-1C 調整 ● RV6/IF-391 (K2) TP17/IF-391 (J1)
	$B = 0.0 \pm 0.02 \text{ V dc}$	VCA-1D 調整 ● RV8/IF-391 (J2) TP18/IF-391 (J1)
		VCA-2A 調整 ⊘ RV10/IF-391 (H5) TP19/IF-391 (G1)
		VCA-2B 調整 ● RV12/IF-391 (H5) TP20/IF-391 (H1)
harana wa mara and		VCA-2C 調整 ● RV14/IF-391 (H2) TP21/IF-391 (H1)
• オシロスコープ CH-1: 1 mS/DIV 10 mV/DIV TRIG: CH-1	上記の規格になるように、各TPを確認しながら、 RV2, 4, 6, 8, 10, 12, 14, 16を調整する。	VCA-2D 調整 ◆ RV16/IF-391 (H2) TP22/IF-391 (G1)

1-3-3. DC レベル調整 (BKE-2030)

調整時の状態	規格	調整箇所
STEP-1 • 接続: 1-2-1項 接続-2 • 延長基板: EX-383基板にてCF-46基	板を載せたIF-391基板を引き出す。	
STEP-2 • 人力信号 REF VIDEO IN: Black Burst/Color Bar/Flat Field • スイッチの設定 MANUAL/PRESET Switch S1/CF-46 (E8): PRESET • ジャンパープラグの設定 COR1, 3, 5, 7: オープン COR2, 4, 6, 8:ショート • オシロスコープ CH-1: 10 μ S/DIV 0.1 V/DIV TRIG: CH-1	TP11/CF-46 (C1) A = $0 \pm 0.05 \text{ V}$	♥ RV1/CF-46 (E1)

1-3-4. SC位相プリセットキャリブレーション調整 (BKE-2030)

調整時の状態	規格	調整箇所
STEP-1 • 接続: 1-2-1項 接続-2 • 延長基板: EX-383基板にてCF-46基	板を載せたIF-391基板を引き出す。	
STEP-2 ・ 入力信号 REF VIDEO IN: Black Burst/Color Bar/Flat Field ・ スイッチの設定 MANUAL/PRESET Switch S1/CF-46 (E8): PRESET ・ ジャンパープラグの設定 COR1, 3, 5, 7: オープン COR2, 4, 6, 8: ショート	FIELD REF (テスト信号発生器出力) TP9/CF-46 (C8) OK	 RV2/CF-46 (D1) 4 B 矢印の箇所にセットする。 A~Bの範囲でD2/CF-46 (B8) が点灯する。
・ オシロスコープ CH-1:20 mS/DIV 2 V/DIV TRIG: CH-1	 上記位相関係を保ちながら、RV2/CF-46 (D1)を回して、LED D2/CF-46 (B8) が点灯する範囲を捜し、RV2をその中央にセットする。 	

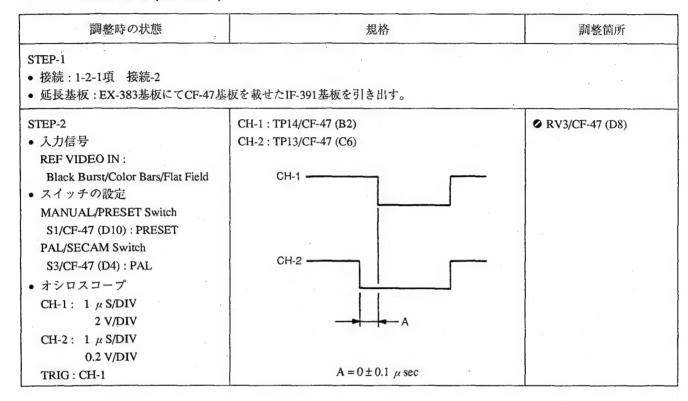
1-3-5. SC位相マニュアルキャリブレーション (BKE-2030)

調整時の状態	規格	調整箇所
STEP-1 ● 接続:1-2-1項 接続-2 ● 延長基板:EX-383基板にてCF-46基	集板を載せたIF-391基板を引き出す。	
STEP-2 ・ 入力信号 REF VIDEO IN: Black Burst/Color Bar/Flat Field ・ スイッチの設定 MANUAL/PRESET Switch S1/CF-46 (E8) MANUAL ・ ジャンパープラグの設定 COR1, 3, 5, 7: オープン COR2, 4, 6, 8: ショート	FIELD REF (テスト信号発生器出力) TP9/CF-46 (C8)	 RV3/CF-46 (C8) 矢印の箇所にセットする。 A~Bの範囲でD2/CF-46 (B8)が点灯する。
・ オシロスコープ CH-1: 20 mS/DIV 2 V/DIV TRIG: CH-1	 上記位相関係を保ちながら、RV3/CF-46 (C8) を回して、LED D2/CF-46 (B8) が点灯する範囲を捜し、RV3をその中央にセットする。 	

1-3-6. DC レベル調整 (BKE-2031)

調整時の状態	規格	調整箇所
STEP-1 • 接続: 1-2-1項 接続-2 • 延長基板: EX-383基板にてCF-47基	板を載せたIF-391基板を引き出す。	
STEP-2 • 入力信号 REF VIDEO IN: Black Burst/Color Bar/Flat Field • スイッチの設定 MANUAL/PRESET Switch S1/CF-47 (D10): PRESET	TP2/CF-47 (B1)	▼ RV2/CF-47 (B1)
 オシロスコープ CH-1: 10 μ S/DIV	$A = 0 \pm 0.05 \text{ V}$	

1-3-7. H-PHASE 調整 (BKE-2031)



1-3-8. SC位相プリセットキャリブレーション調整 (BKE-2031)

調整時の状態	規格	調整箇所
STEP-1 ● 接続: 1-2-1項 接続-2 ● 延長基板: EX-383基板にてCF-47基	板を載せたIF-391基板を引き出す。	
STEP-2 • 入力信号 REF VIDEO IN: Black Burst/Color Bar/Flat Field • スイッチの設定 MANUAL/PRESET Switch S1/CF-47 (D10): PRESET PAL/SECAM Switch S3/CF-47 (D4): PAL	FIELD REF (テスト信号発生器出力) TP12/CF-47 (B7)	 RV5/CF-47 (C1) ・ 矢印の箇所にセットする。 ・ A~Bの範囲でD1/CF-47 (B10) が点灯する。
・ オシロスコープ CH-1: 20 mS/DIV 2 V/DIV TRIG: CH-1	 上記位相関係を保ちながら、RV5/CF-47 (C1)を回して、LED D1/CF-47 (B10) が点灯する範囲を捜し、RV5をその中央にセットする。 	

1-3-9. SC位相マニュアルキャリブレーション調整 (BKE-2031)

調整時の状態 規格 調整箇所 STEP-1 • 接続: 1-2-1項 接続-2 • 延長基板: EX-383基板にてCF-47基板を載せたIF-391基板を引き出す。 STEP-2 FIELD REF (テスト信号発生器出力) RV1/CF-47 (C10) • 入力信号 TP12/CF-47 (B7) REF VIDEO IN: Black Burst/Color Bar/Flat Field • スイッチの設定 MANUAL/PRESET Switch \$1/CF-47 (D10): MANUAL • 矢印の箇所にセットす OK -PAL/SECAM Switch \$3/CF-47 (D4): PAL • A~Bの範囲でD1/CF-47 (C10)が点灯する。 NG -• オシロスコープ CH-1: 20 mS/DIV • 上記位相関係を保ちながら、RV1/CF-47 (C10)を回し て、LED D1/CF-47 (C10) が点灯する範囲を捜し、 2 V/DIV TRIG: CH-1 RV1をその中央にセットする。

1-3-10. SECAMキャリブレーション調整 (BKE-2031)

調整時の状態	規格	調整箇所
STEP-1 •接続: 1-2-1項 接続-2 •延長基板: EX-383基板にてCF-47基	板を載せたIF-391基板を引き出す。	
STEP-2 • 入力信号 REF VIDEO IN: VIDEO 信号 • スイッチの設定 MANUAL/PRESET Switch S1/CF-47 (D10): PRESET PAL/SECAM Switch S3/CF-47 (D4): SECAM • オシロスコープ CH-1: 20 μ S/DIV 1 V/DIV TRIG: CH-1	NG 1H OK 2H NG 2H NG	 RV4/CF-47 (D1) 矢印の箇所にセットする。 A~Bが検出範囲。

1-4. BKE-2010の調整

1-4-1. サーチダイアルパルスアンプ調整

調整時の状態	規格	調整箇所
STEP-1 • 接続:1-2-1項 接続-3		
	アルを回しながら、DET-11基板のRV1を左右に回す。 にCPU-132基板のTP10にパルスが現れ始める点と、右に 中央にRV1をセットする。	に回して行ったときに
STEP-3 • JOGモードにし、STEP-2と同	様にして、CPU-132基板のTP9に対してDET-11基板のR	V2を調整する。
STEP-4	• サーチダイアルをFWD方向に回す。	● RV1/DET-11
	• TP10とTP9の位相を確認する。	TP10/CPU-132 (G6)
	CH-1 : TP10/CPU-132 (G6)	⊘ RV2/DET-11
	CH-2 : TP9/CPU-132 (G6)	TP9/CPU-132 (G6)
	50% 50%	
•	CH-1 90°	
	CH-2	<u></u>
・オシロスコープ	50% 50%	
CH-1: 2 mS/DIV	30 /0 30 /0	
2 V/DIV		
CH-2 : 2 mS/DIV 2 V/DIV	注意: デューティ比 50 %	
TRIG: CH-1	CH-1とCH-2の位相差を90°にする。	

調整時の状態	規格	調整箇所
STEP-5	サーチダイアルをREV方向に回す。TP10とTP9の位相を確認する。	⊘ RV1/DET-11 TP10/CPU-132 (G6)
	CH-1 : TP10/CPU-132 (G6) CH-2 : TP9/CPU-132 (G6)	⊘ RV2/DET-11 TP9/CPU-132 (G6)
	50% 50% CH-1 90°	
• オシロスコープ CH-1 : 2 mS/DIV	CH-2 50% 50%	
2 V/DIV CH-2 : 2 mS/DIV 2 V/DIV TRIG : CH-1	注意 : デューティ比 50 % CH-1とCH-2の位相差を90° にする。	

SECTION 1 ELECTRICAL ADJUSTMENTS

1-1. ADJUSTMENT SEQUENCE

1-2. PREPARATION BEFORE ADJUSTMENTS 1-3-1. Audio Analog Control Amplitude Voltage Adjustment 1-3-2. Audio Analog Control Offset Voltage Adjustment 1-3-3. DC Level Adjustment (BKE-2030) 1-3-4. SC Phase Preset Calibration Adjustment (BKE-2030) 1-3-5. SC Phase Manual Calibration Adjustment (BKE-2030) 1-3-6. DC Level Adjustment (BKE-2031) 1-3-7. H-Phase Adjustment (BKE-2031) 1-3-8. SC Phase Preset Calibration Adjustment (BKE-2031)

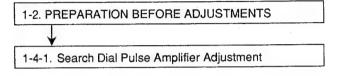
1-3-9. SC Phase Manual Calibration Adjustment

1-3-10. Secam Calibration Adjustment

(BKE-2031)

(BKE-2031)

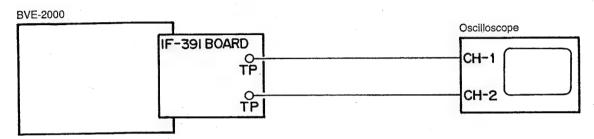
BKE-2010 Adjustments



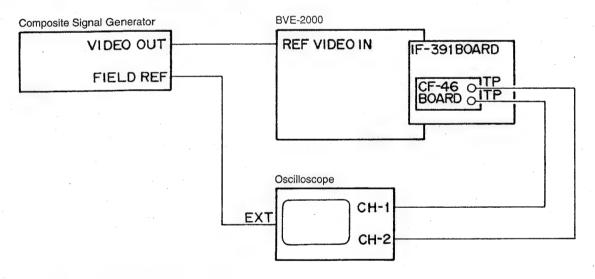
1-2. ADJUSTMENT PREPARATION

1-2-1. Connection

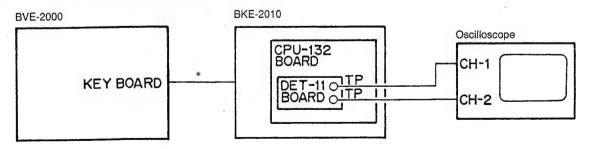
Connection-1: When adjusting BVE-2000



Connection-2: When adjusting BKE-2030/BKE-2031



Connection-3: When adjusting BKE-2010



^{*:} Cable (10 m) supplied with BKE-2010 (1-559-650-11)

1-2-2. Tools/Measuring Equipments

1. Composite Signal Generator

Equivalent: 1410/Sony Tektronix (For NTSC) 1411/Sony Tektronix (For PAL)

1431/Sony Tektronix (For SECAM)

2. Oscilloscope

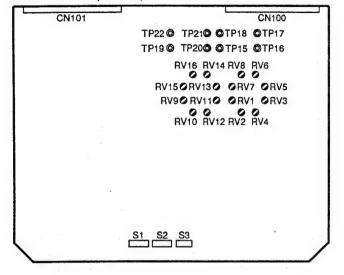
Equivalent: 2445 or 2465/Sony Tektronix

3. Extension Board (EX-383) Sony Part No.: J-6187-390-A

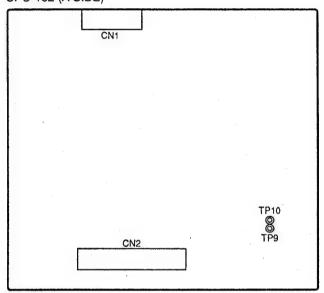
1-2-3. Layout of Adjustment Controls

BVE-2000

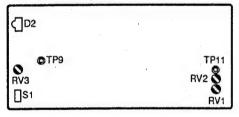
IF-391 BOARD (A SIDE)



BKE-2010 CPU-132 (A SIDE)

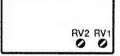


BKE-2030 CF-46 BOARD (A SIDE)

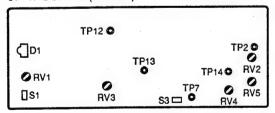


BKE-2010

DET-11 BOARD (A SIDE)



BKE-2031 CF-47 BOARD (A SIDE)



1-3. BVE-2000 ADJUSTMENTS

1-3-1. Audio Analog Control Amplitude Voltage Adjustment

Adjustment Conditions	Specifications	Adjusting Points
 STEP-1 Connection: Section 1-2-1 Connection: Section 1-2-1 Connection: Extend the IF-39 Switch settings: S1/IF-391 (D15)= S2/IF-391 (E15) = ON S3-1, 2, 3/IF-391 (F15) = ON S3-4, 5/IF-391 (F15) = OFF 	1 board with the EX-383 board.	
STEP-2	Test Point	VCA-1A adjustment ● RV1/IF-391 (J3) TP15/IF-391 (J1)
		VCA-1B adjustment ● RV3/IF-391 (K3) TP16/IF-391 (J1)
		VCA-1C adjustment ● RV5/IF-391 (K3) TP17/IF-391 (J1)
	GND	VCA-1D adjustment ⊘ RV7/IF-391 (J3) TP18/IF-391 (J1)
	$A = 5.0 \pm 0.1 \text{ V dc}$	VCA-2A adjustment ⊘ RV9/IF-391 (H3) TP19/IF-391 (G1)
		VCA-2B adjustment ⊘ RV11/IF-391 (J3) TP20/IF-391 (H1)
		VCA-2C adjustment ⊘ RV13/IF-391 (J3) TP21/IF-391 (H1)
 Oscilloscope CH-1: 1mS/DIV 1V/DIV TRIG: CH-1 	 Adjust ■ RVs 1, 3, 5, 7, 9, 11, 13 and 15 while checking each TPs so that the above specification is satisfied. 	VCA-2D adjustment ⊘ RV15/IF-391 (H3) TP22/IF-391 (G1)

1-3-2. Audio Analog Control Offset Voltage Adjustment

Adjustment Conditions	Specifications	Adjusting Points
STEP-1 Connection: Section 1-2-1 Connection: Section 1-2-1 Connection: Extension board: Extend the IF-39: Switch settings: S1/IF-391 (D15) = S2/IF-391 (E15) = S3-1, 2, 3/IF-391 (S3-4, 5/IF-391 (F1)	1 board with the EX-383 board. ON ON F15) = ON	
STEP-2	Test Point	VCA-1A adjustment ⊘ RV2/IF-391 (J5) TP15/IF-391 (J1)
		VCA-1B adjustment ✔ RV4/IF-391 (K5) TP16/IF-391 (J1)
	B	VCA-1C adjustment ⊘ RV6/IF-391 (K2) TP17/IF-391 (J1)
	GND	VCA-1D adjustment ⊘ RV8/IF-391 (J2) TP18/IF-391 (J1)
	$B = 0.0 \pm 0.02 \text{ V dc}$	VCA-2A adjustment ⊘ RV10/IF-391 (H5) TP19/IF-391 (G1)
		VCA-2B adjustment ⊘ RV12/IF-391 (H5) TP20/IF-391 (H1)
Occillangens		VCA-2C adjustment ⊘ RV14/IF-391 (H2) TP21/IF-391 (H1)
 Oscilloscope CH-1: 1 mS/DIV 10 mV/DIV TRIG: CH-1 	 Adjust PRVs 2, 4, 6, 8, 10, 12, 14 and 16 while checking each TPs so that the above specification is satisfied. 	VCA-2D adjustment ⊘ RV16/IF-391 (H2) TP22/IF-391 (G1)

1-3-3. DC Level Adjustment (BKE-2030)

Adjustment Conditions	Specifications .	Adjusting Points
STEP-1 Connection : Section 1-2-1 Connection Extension board : Extend the IF-39	tion-2 1 board mounting the CF-46 board with the EX-383 board	f.
STEP-2 • Input signal REF VIDEO IN: Black Burst/Color Bar/Flat Field	TP11/CF-46 (C1)	
 Switch settings: MANUAL/PRESET Switch S1/CF-46 (E8): PRESET Jumper Plug settings: COR1, 3, 5, 7: open 	A GND	
OR2, 4, 6, 8 : short Oscilloscope CH-1 : 10 mS/DIV 0.1V/DIV TRIG : CH-1	$A = 0 \pm 0.05 \text{ V}$	

1-3-4. SC Phase Preset Calibration Adjustment (BKE-2030)

Adjustment Conditions	Specifications	Adjusting Points
STEP-1 Connection : Section 1-2-1 Conne Extension board : Extend the IF-38	ction-2 91 board mounting the CF-46 board with the EX-383 board	d.
 STEP-2 Input signal REF VIDEO IN: Black Burst/Color Bar/Flat Field Switch settings: MANUAL/PRESET Switch S1/CF-46 (E8): PRESET Jumper Plug settings: COR1, 3, 5, 7: open COR2, 4, 6, 8: short 	FIELD REF (Test signal generator output) TP9/CF-46 (C8)	RV2/CF-46 (D1) Set to the point shown by the arrow. D2/CF-46 (B8) lights up in the A through B range.
Oscilloscope CH-1: 20 mS/DIV	 While maintaining the above phase relation, turn RV2/CF-46 (D1) and find the range in which the LED D2/CF-46 (B8) lights up, and set RV2 to the center of this range. 	

1-3-5. SC Phase Manual Calibration Adjustment (BKE-2030)

Adjustment Conditions	Specifications	Adjusting Points
STEP-1 Connection: Section 1-2-1 Connection: Extension board: Extend the IF-39	ction-2 of board mounting the CF-46 board with the EX-383 board	1.
STEP-2 Input signal REF VIDEO IN: Black Burst/Color Bar/Flat Field Switch settings: MANUAL/PRESET Switch S1/CF-46 (E8): PRESET Jumper Plug settings: COR1, 3, 5, 7: open COR2, 4, 6, 8: short	FIELD REF (Test signal generator output) TP9/CF-46 (C8)	RV3/CF-46 (C8) A B Set to the point shown by the arrow. D2/CF-46 (B8) lights up in the A through B range.
Oscilloscope CH-1: 20 mS/DIV 2V/DIV TRIG: CH-1	 While maintaining the above phase relation, turn RV3/CF-46 (C8) and find the range in which the LED D2/CF-46 (B8) lights up, and set RV3 to the center of this range. 	

1-3-6. DC Level Adjustment (BKE-2031)

Adjustment Conditions	Specifications	Adjusting Points
STEP-1 • Connection : Section 1-2-1 Connection : Extension board : Extend the IF-39	tion-2 1 board mounting the CF-47 board with the EX-383 board	d.
STEP-2 • Input signal REF VIDEO IN: Black Burst/Color Bar/Flat Field • Switch settings: MANUAL/PRESET Switch S1/CF-47 (D10): PRESET	TP2/CF-47 (B1)	
Oscilloscope CH-1: 10 mS/DIV 0.1V/DIV TRIG: CH-1	A = 0 ± 0.05 V	

1-3-7. H-Phase Adjustment (BKE-2031)

Adjustment Conditions	Specifications	Adjusting Points
STEP-1 Connection : Section 1-2-1 Connection board : Extend the IF-3	ection-2 91 board mounting the CF-47 board with the EX-383	board.
STEP-2 Input signal REF VIDEO IN: Black Burst/Color Bar/Flat Field Switch settings: MANUAL/PRESET Switch S1/CF-47 (D10): PRESET PAL/SECAM Switch S3/CF-47 (D4): PAL	CH-1: TP14/CF-47 (B2) CH-2: TP13/CF-47 (C6)	● RV3/CF-47 (D8)
• Oscilloscope CH-1: 1 μS/DIV 2V/DIV	A	
CH-2: $1 \mu S/DIV$ 0.2V/DIV TRIG: CH-1	$A = 0 \pm 0.01 \mu sec$	

1-3-8. SC Phase Preset Calibration Adjustment (BKE-2031)

Adjustment Conditions	Specifications	Adjusting Points
STEP-1 Connection : Section 1-2-1 Conne Extension board : Extend the IF-39	ction-2 91 board mounting the CF-47 board with the EX-383 board	d.
STEP-2 Input signal REF VIDEO IN: Black Burst/Color Bar/Flat Field Switch settings: MANUAL/PRESET Switch S1/CF-47 (D10): PRESET PAL/SECAM Switch S3/CF-47 (D4): PAL	FIELD REF (Test signal generator output) TP12/CF-47 (B7) OK	RV5/CF-47 (C1) A B Set to the point shown by the arrow. D1 lights up in the A through B range.
Oscilloscope CH-1: 20 mS/DIV 2V/DIV TRIG: CH-1	 While maintaining the above phase relation, turn RV5/CF-47 (C1) and find the range in which the LED D1/CF-47 (B10) lights up, and set RV5 to the center of this range. 	

1-3-9. SC Phase Manual Calibration Adjustment (BKE-2031)

	Adjustment Conditions	Specifications	Adjusting Points
STEP-1 • Connection : Section 1-2-1 Connection-2 • Extension board : Extend the IF-391 board mounting the CF-47 board with the EX-383 board.			
	STEP-2 Input signal REF VIDEO IN: Black Burst/Color Bar/Flat Field Switch settings: MANUAL/PRESET Switch S1/CF-47 (D10): MANUAL PAL/SECAM Switch S3/CF-47 (D4): PAL	FIELD REF (Test signal generator output) TP12/CF-47 (B7)	Set to the point shown by the arrow. D1/CF-47 (C10) lights up in the A through B range.
	Oscilloscope CH-1: 20 mS/DIV 2V/DIV TRIG: CH-1	 While maintaining the above phase relation, turn RV5/CF-47 (C10) and find the range in which the LED D1/CF-47 (C10) lights up, and set RV5 to the center of this range. 	

1-3-10. SECAM Calibration Adjustment (BKE-2031)

Adjustment Conditions	Specifications	Adjusting Points
STEP-1 Connection : Section 1-2-1 Connection : Extension board : Extend the IF-39	tion-2 1 board mounting the CF-47 board with the EX-383 board	1.
STEP-2 • Input signal REF VIDEO IN: VIDEO signal • Switch settings: MANUAL/PRESET Switch S1/CF-47 (D10): PRESET PAL/SECAM Switch S3/CF-47 (D4): SECAM	NG	RV4/CF-47 (D1) Set to the point shown by the arrow. Range A through B in which the signal can be detected.
Oscilloscope CH-1: 20 μS/DIV 1V/DIV TRIG: CH-1	 Observe the signal of TP7 on the CF-47 board, turn RV4 and find the range in which the signal specified above (2H period) can be detected, and set RV4 to the center of this range. 	

1-4. BKE-2010 ADJUSTMENTS

1-4-1. Search Dial Pulse Amplifier Adjustment

Adjustment Conditions	Specifications	Adjusting Points
STEP-1 Connection : Section 1-2-1 Conne	ction-3	
clockwise directions. Set © RV1 to the center between	otating the search dial, turn or RV1 on the DET-11 board in the point at which a pulse appears at TP10 of the CPU-13 point at which a pulse appears when or RV1 is turned.	
STEP-3 • Enter the JOG mode and, like in S CPU-132 board.	STEP-2, adjust S RV2 on the DET-11 board with respect to	the output from TP9 on the
STEP-4	 Rotate the search dial in the FWD direction Check the phases of TP10 and TP9. 	⊘ RV1/DET-11 TP10/CPU-132 (G6)
	CH-1: TP10/CPU-132 (G6) CH-2: TP9/CPU-132 (G6)	⊘ RV2/DET-11 TP9/CPU-132 (G6)
Oscilloscope	CH-1 90° CH-2 50% 50%	
CH-1 : 2 mS/DIV 2V/DIV CH-2 : 2 mS/DIV 2V/DIV TRIG : CH-1	NOTE: Adjust the duty ratio to 50% and the phase difference of CH-1 and CH-2 to 90°C.	

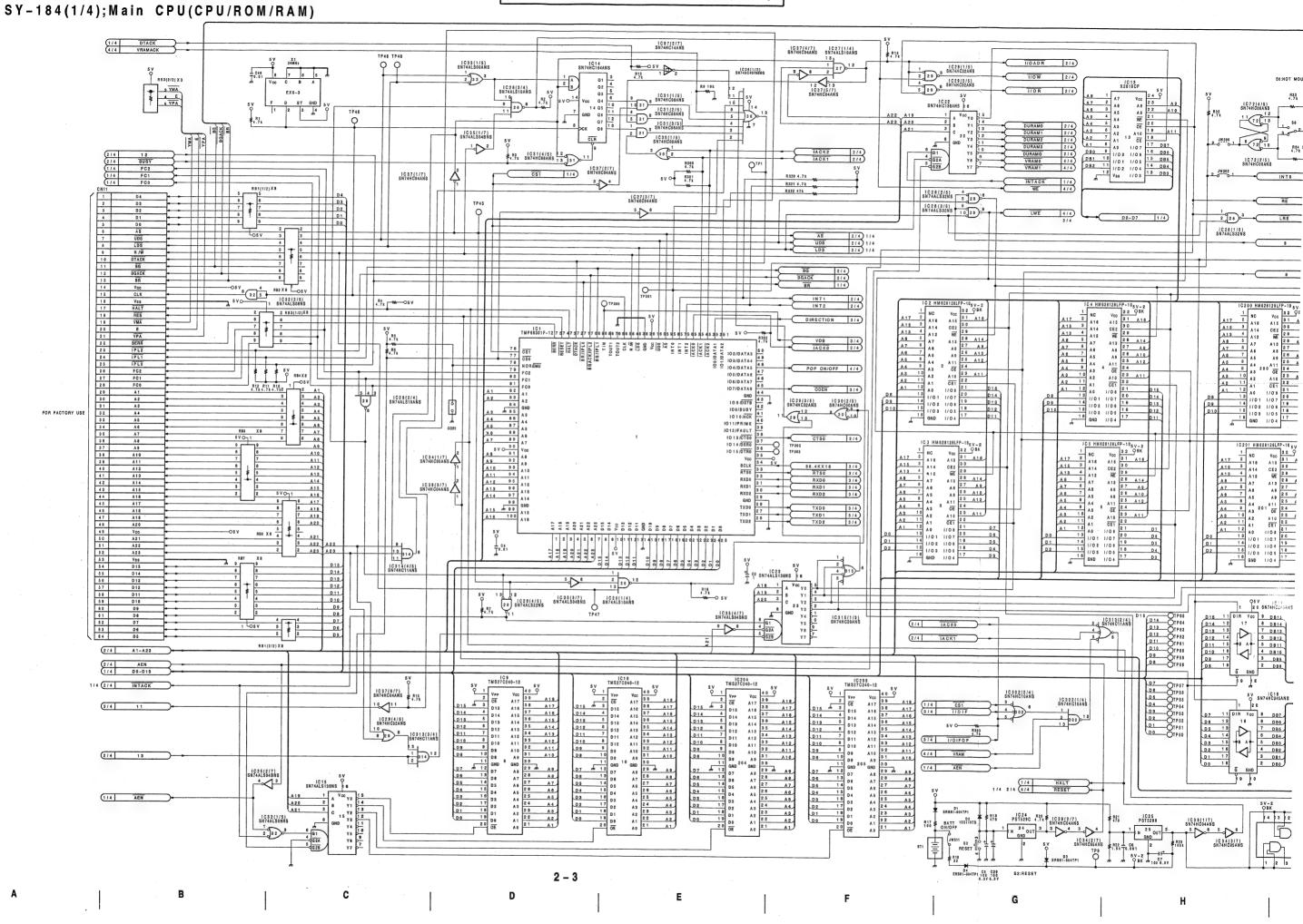
Adjustment Conditions	Specifications	Adjusting Points
STEP-5	 Rotate the search dial in the REV direction Check the phases of TP10 and TP9. 	● RV1/DET-11 TP10/CPU-132 (G6)
	CH-1 : TP10/CPU-132 (G6) CH-2 : TP9/CPU-132 (G6)	◆ RV2/DET-11 TP9/CPU-132 (G6)
Oscilloscope CH-1 :2 mS/DIV	CH-1 90° CH-2 50% 50% and the phase difference of CH-1 and CH-2 to 90°C.	

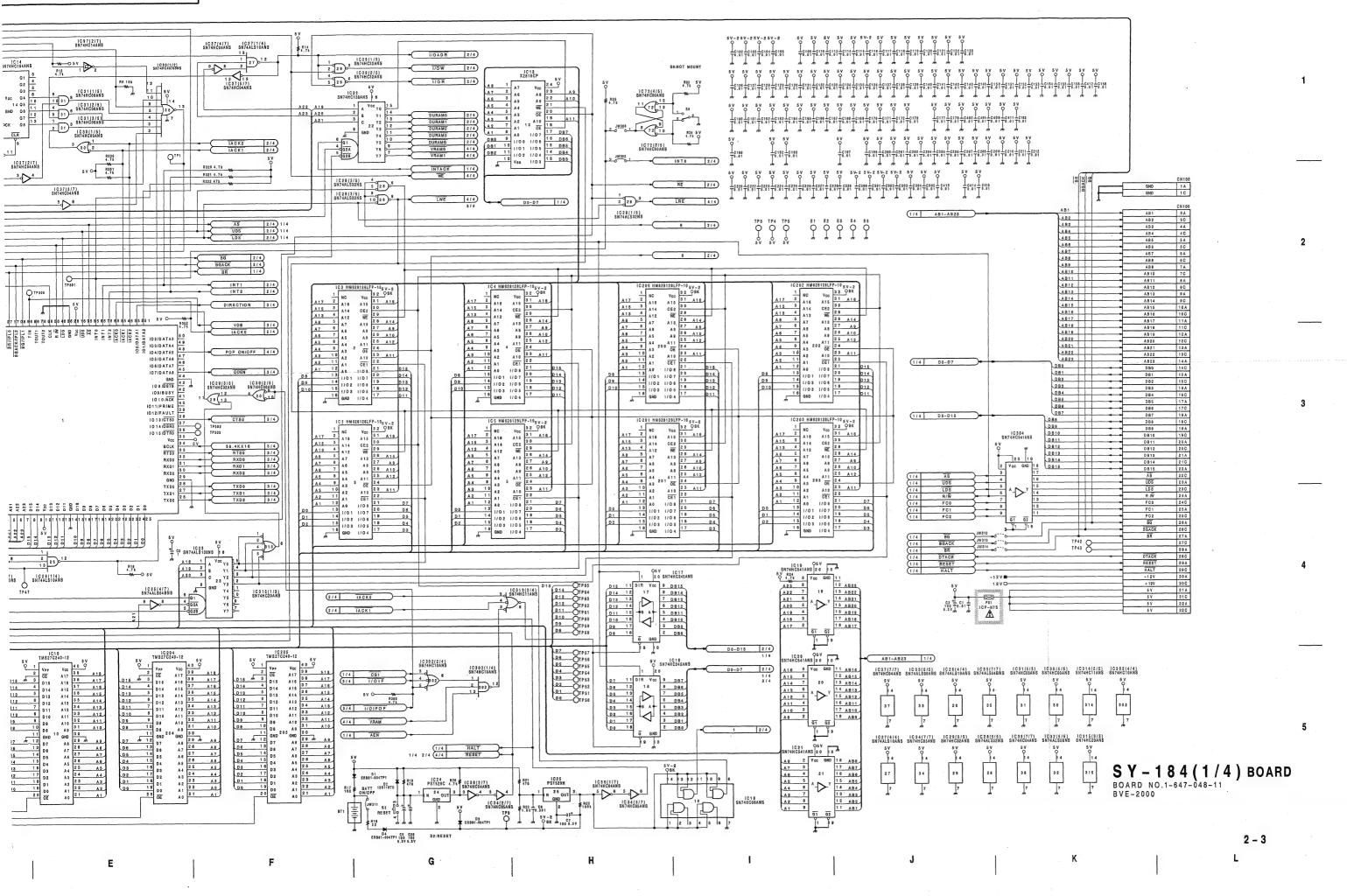
SECTION 2 SCHEMATIC DIAGRAMS

Board	Function Page
BVE-2000	
SY-184(1/4)	Main CPU(CPU/ROM/RAM)2-3
SY-184(2/4)	Main CPU(DMA/FDC)2-5
SY-184(3/4)	Main CPU(Clock, RS232)2-7
SY-184(4/4)	Main CPU(CRTC, VRAM) ·······················2-9
IF-391(1/3)	Interface(SYNC GEN, GPI, Monitor SWER) ······2-11
IF-391(2/3)	Interface(Port A/B) ······2-13
IF-391(3/3)	interface(SWER/Mixer) ······2-15
CF-46(BKE-2030)	NTSC Color Framing Detector2-17
CF-47 (BKE-2031)	PAL Color Framing Detector2-19
lF-402(1/3)(BKE-2020)	R\$422 1/F(Port E,F)2-21
1F-402(2/3)(BKE-2020)	RS422 1/F(Port G,H)2-23
IF-402(3/3)(BKE-2020)	RS422 1/F(Port I,J)2-25
	Mother Board ······2-27
MB-454(1/3)	Mother Board2-27 Mother Board2-29
M B - 454(2/3)	Mother Board2-29
MB-454(3/3)	Mother Board ······2-31
CN-781	Connector2-33
CN-786	Connector ······2-35
CN-787	Connector2-37
CN-788(BKE-2020)	Connector2-39
FRAME WIRING(1/2)	Frame Wiring ······2-41
FRAME WIRING(2/2)	Frame Wiring2-43
BKE-2010	
CONTROL PANEL	Control Panel2-45

注意; ▲ 印のついた部品は安全性を維持するために重要な部品です。 従って交換する時は必ず指定の部品を使ってください。

NOTE; The Δ -marked components are critical to sefety. Replace only with same components as specified.





SY-184(2/4); Main CPU(DMA/FDC)

G14 DIRECTION C

D

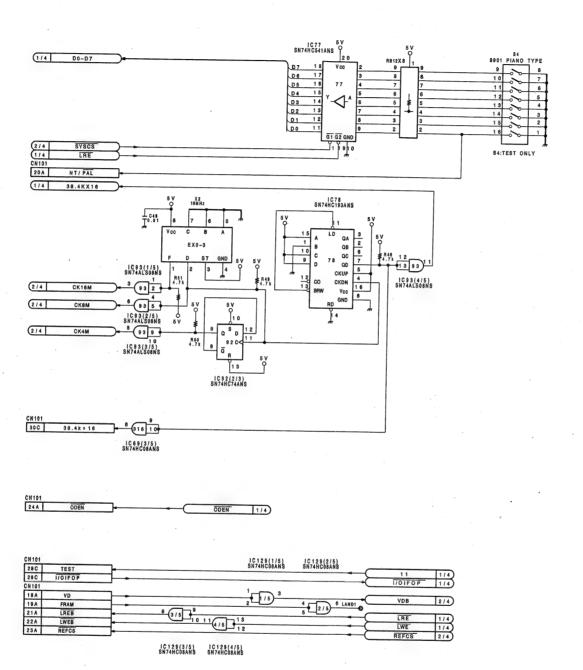
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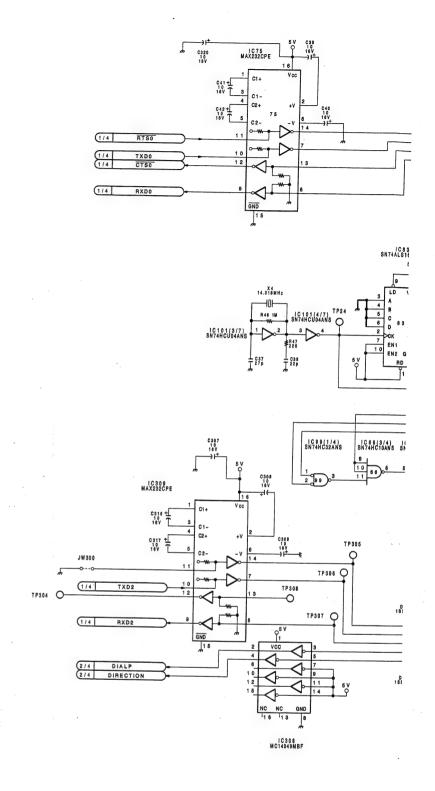
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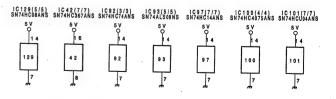
E

F

SY-184(3/4); Main CPU(Clock, RS232)



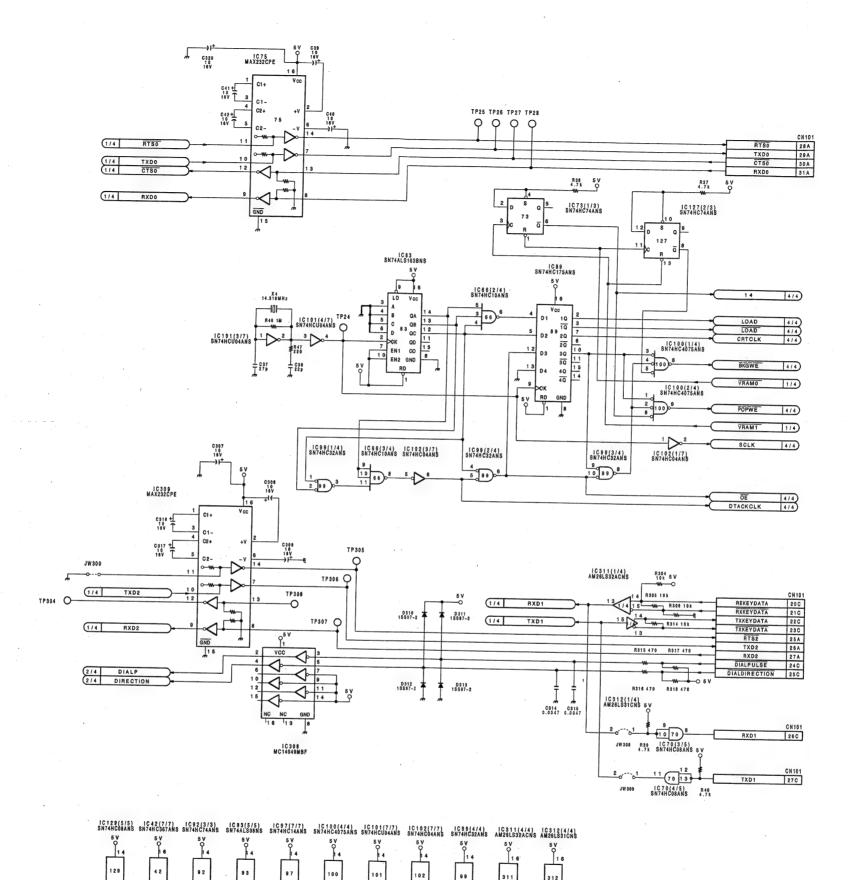




2 – 7

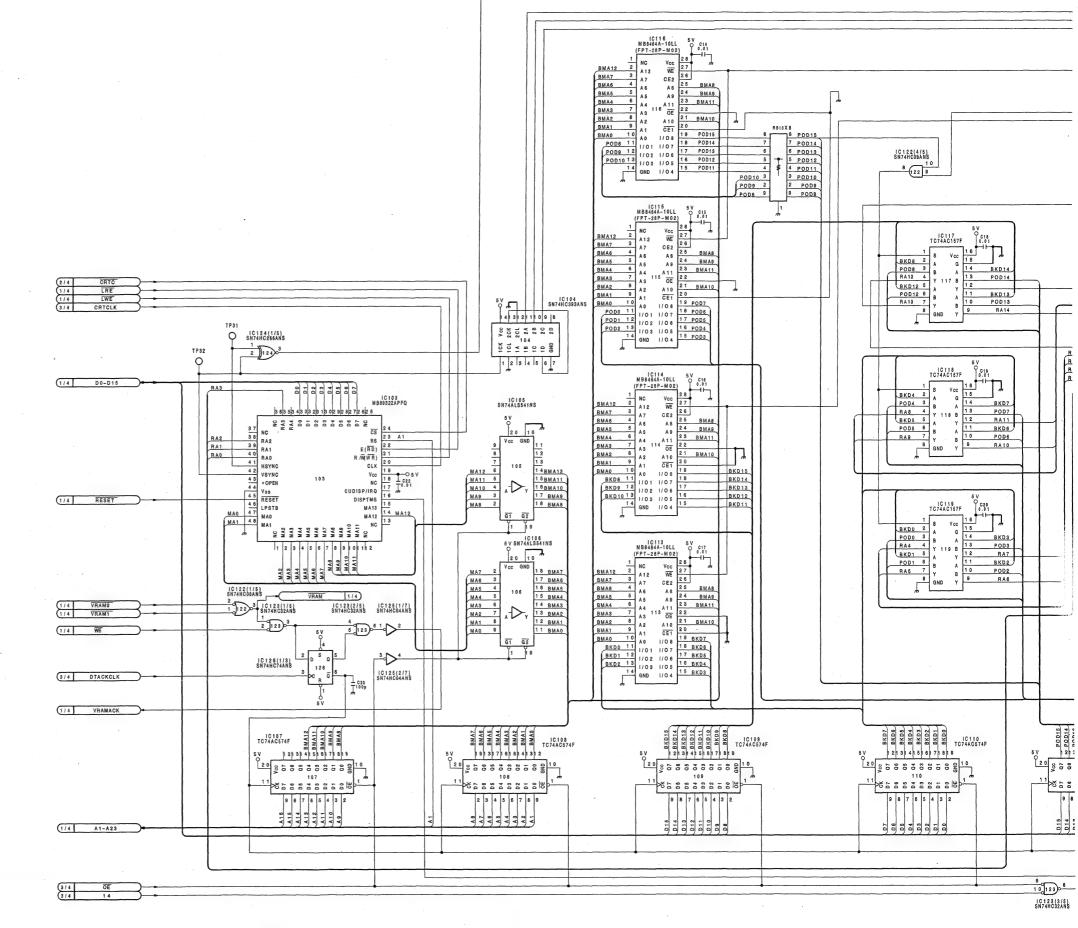
G

84:TEST ONLY



IC129(2/5) SN74HC08ANS

SY-184(3/4) BOARD BOARD BVE-2000



2 - 9

В

SY-184(4/4); Main CPU(CRTC, VRAM)

C

1

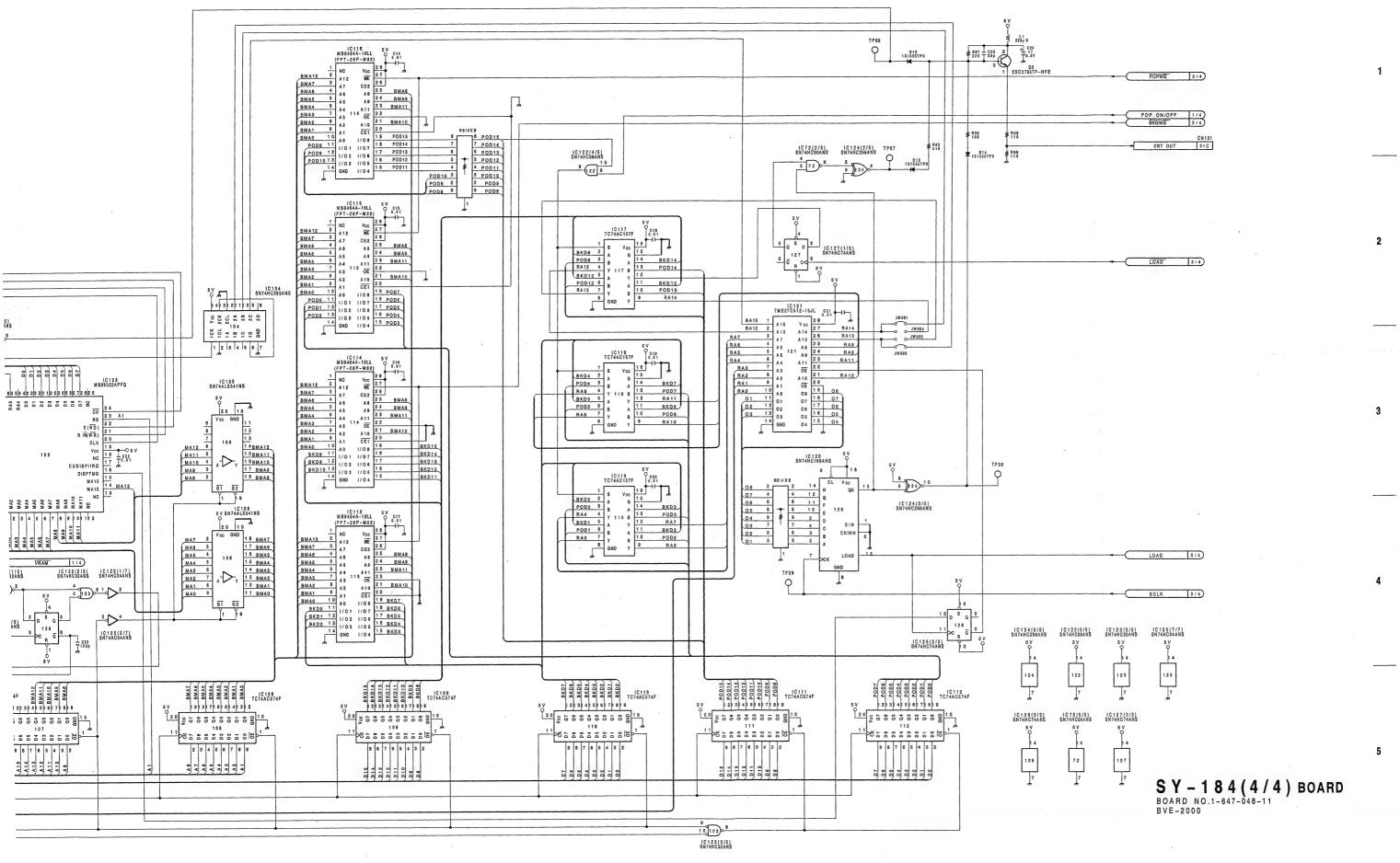
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2 – 9

2 - 11

В

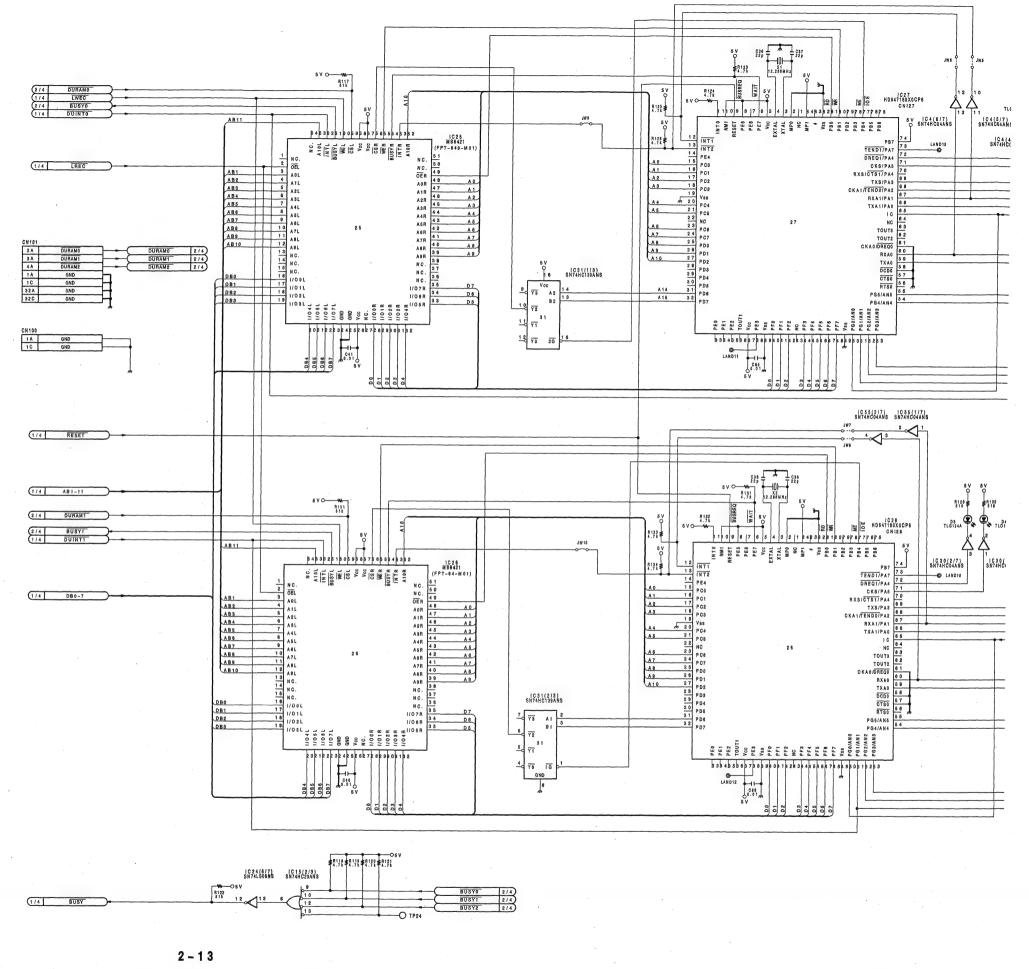
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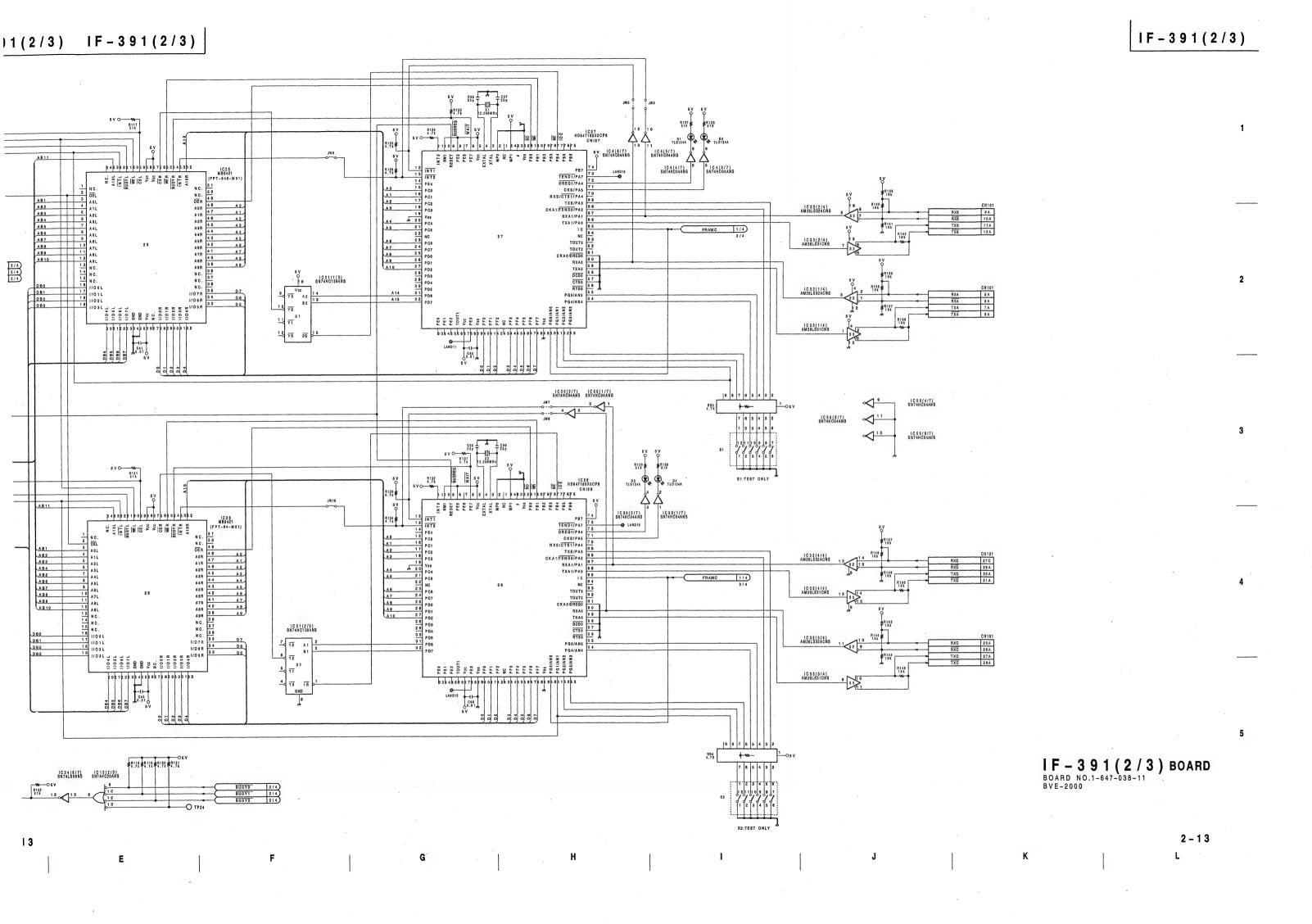
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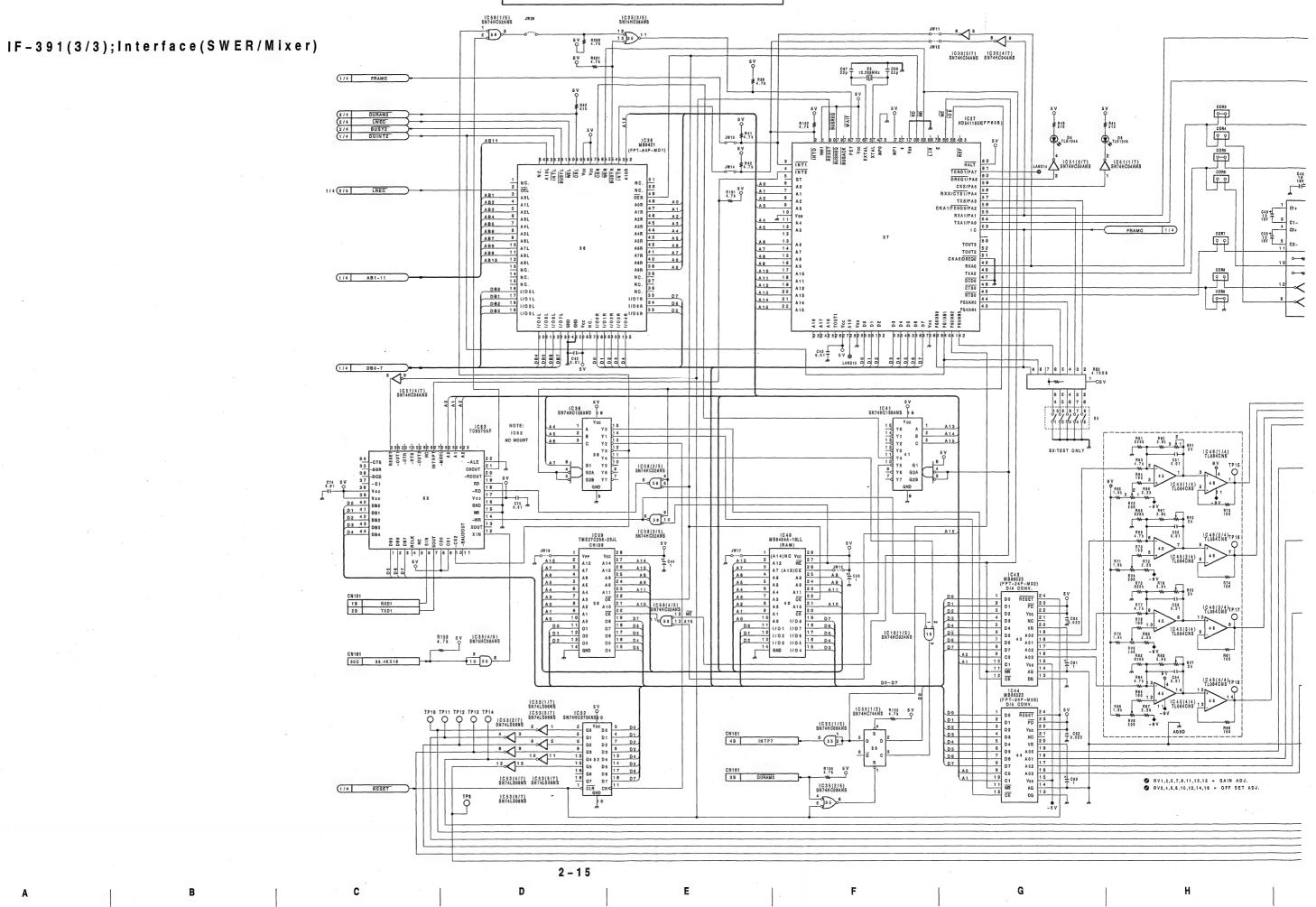
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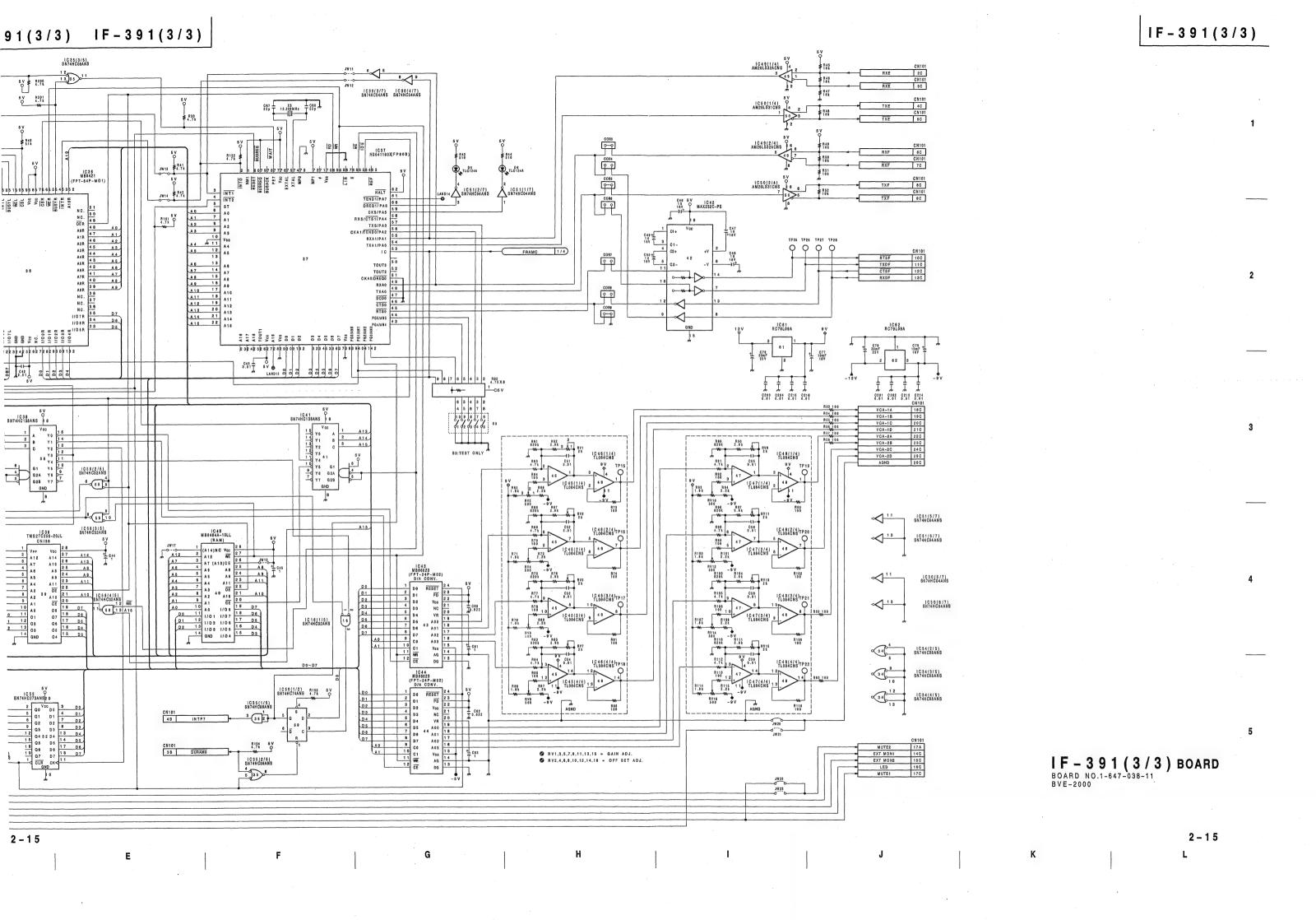
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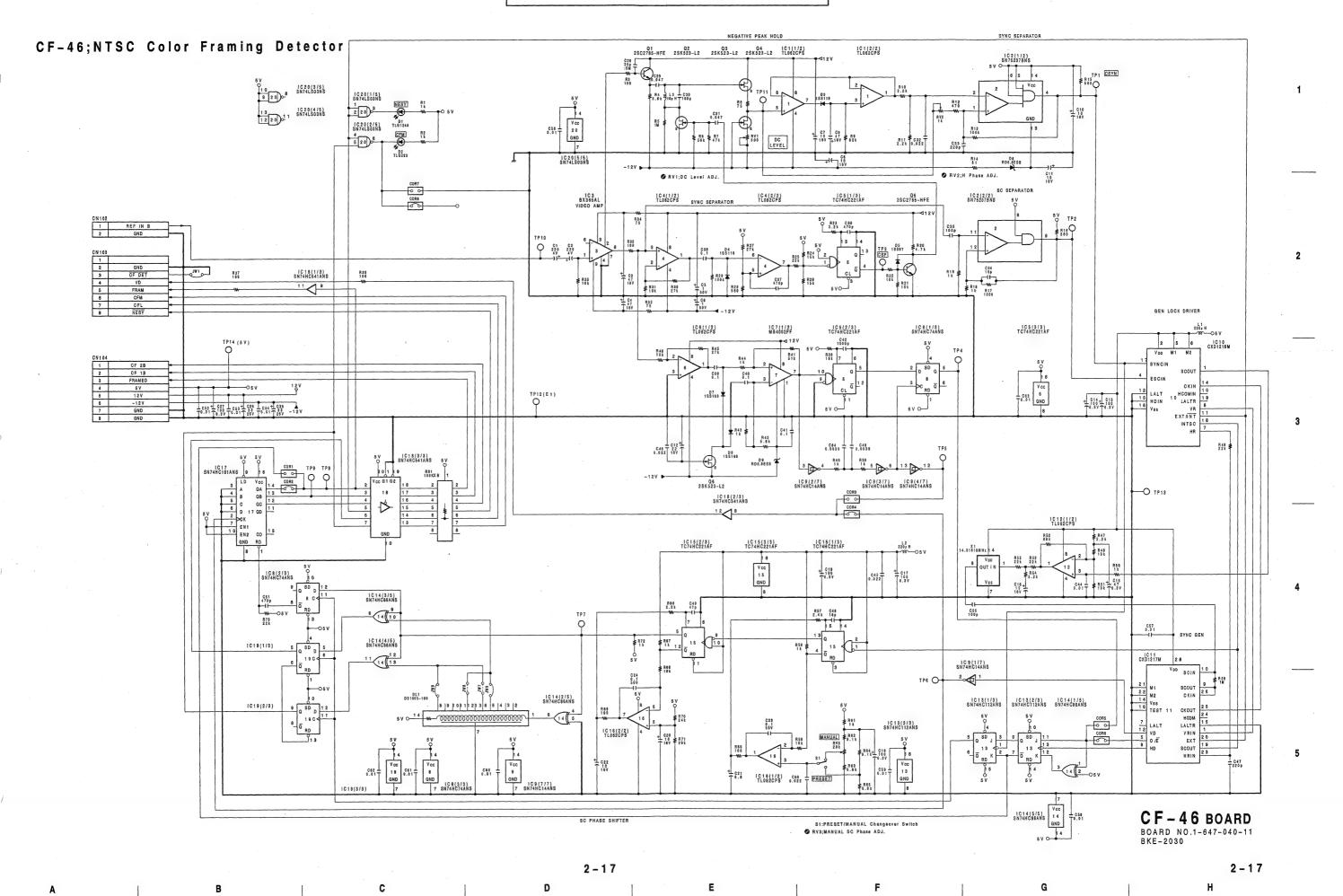
IF - 3 9 1 (2/3); Interface (Port A/B)

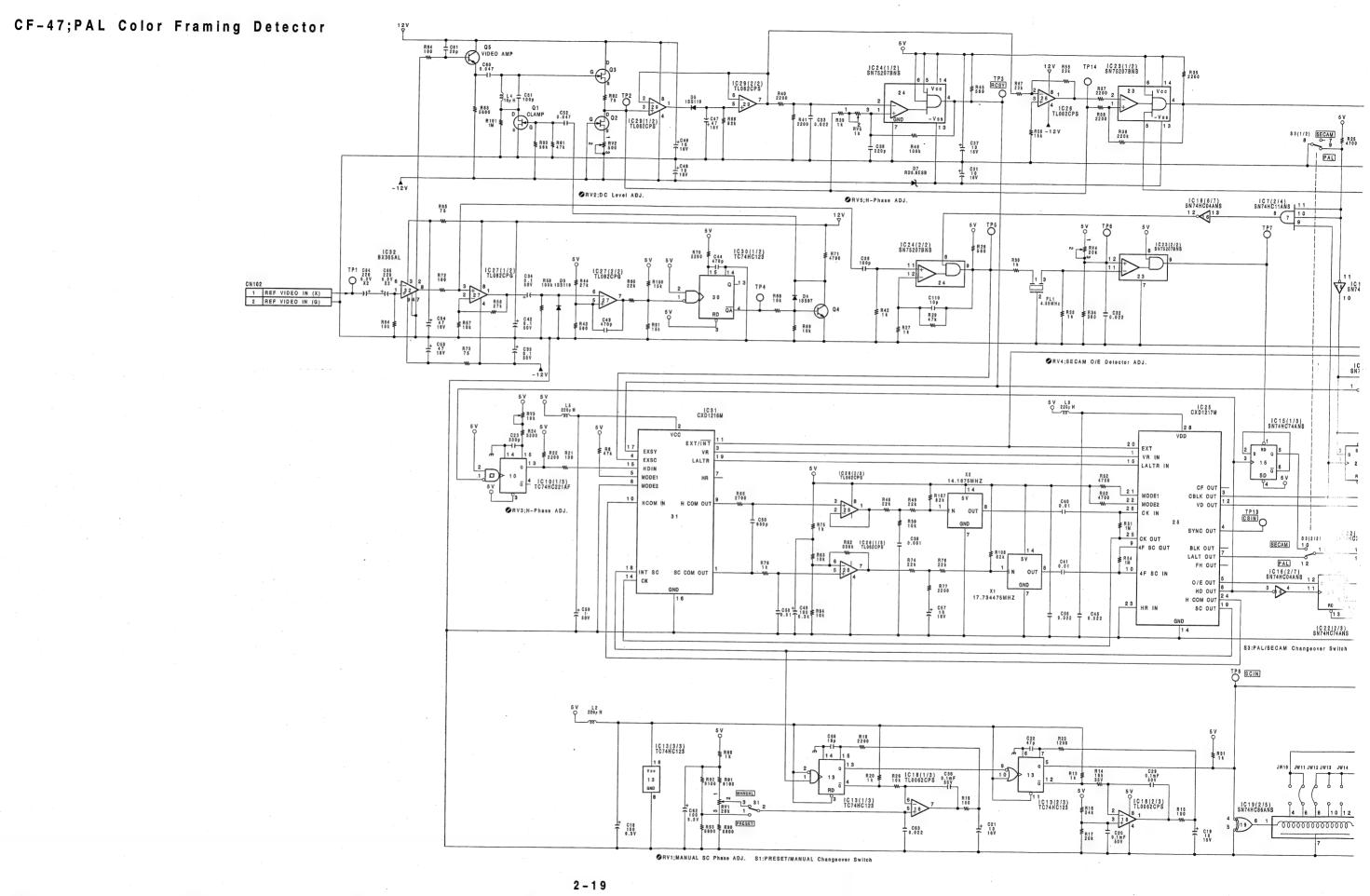


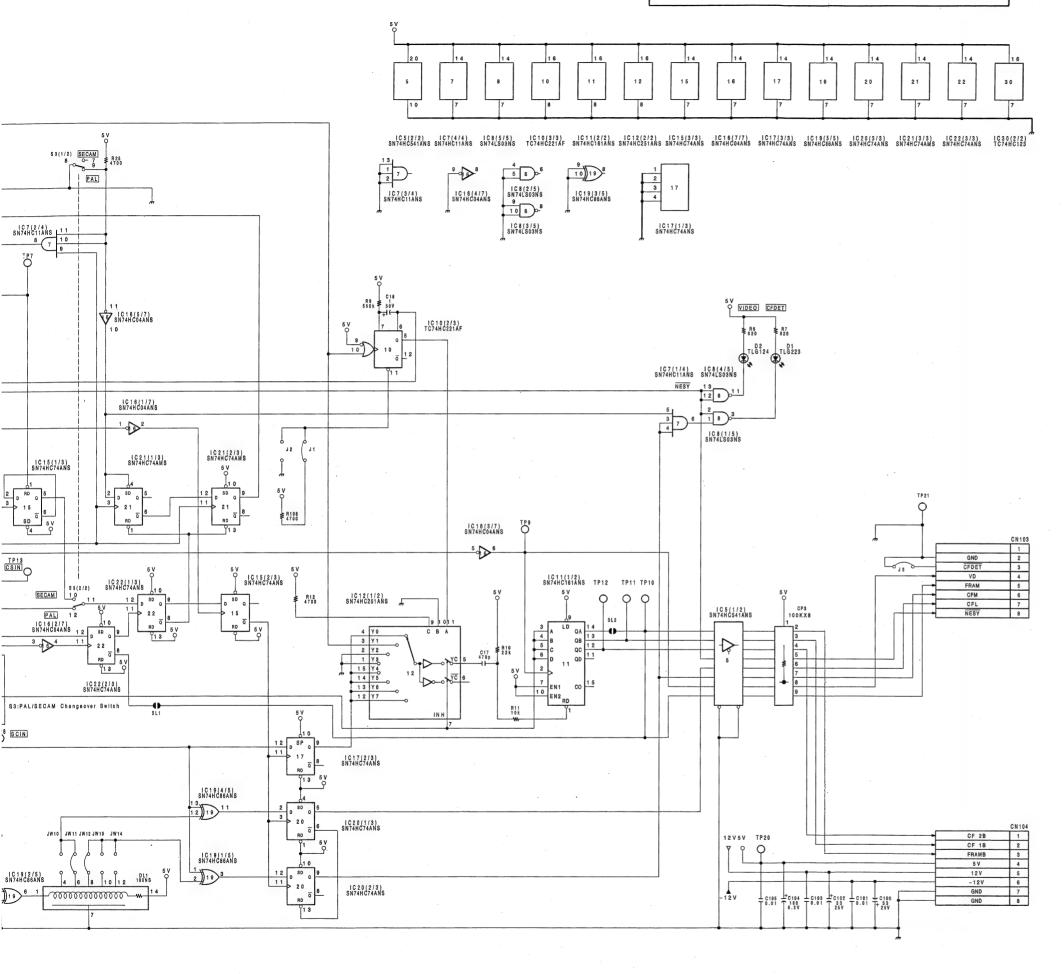




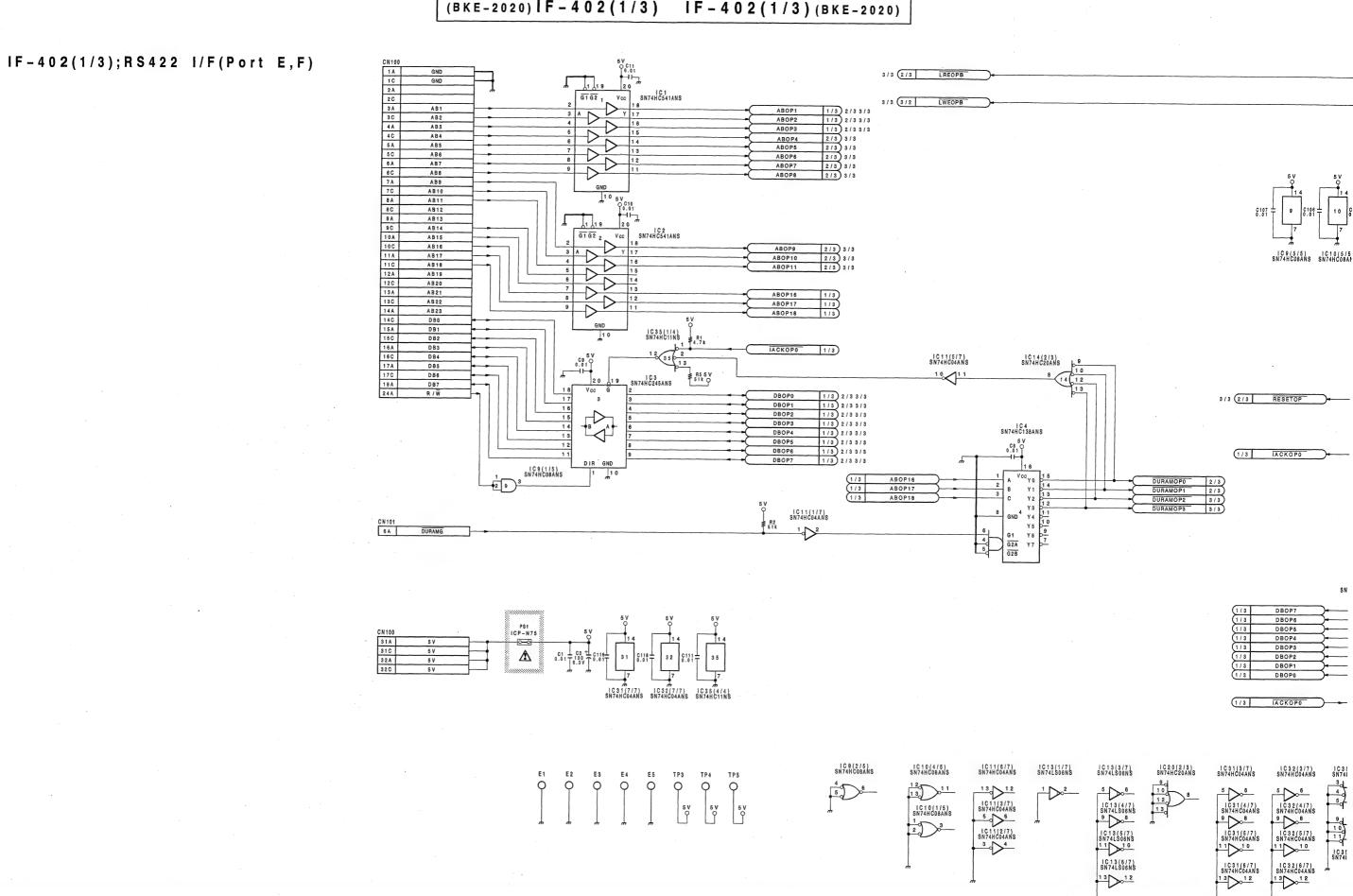


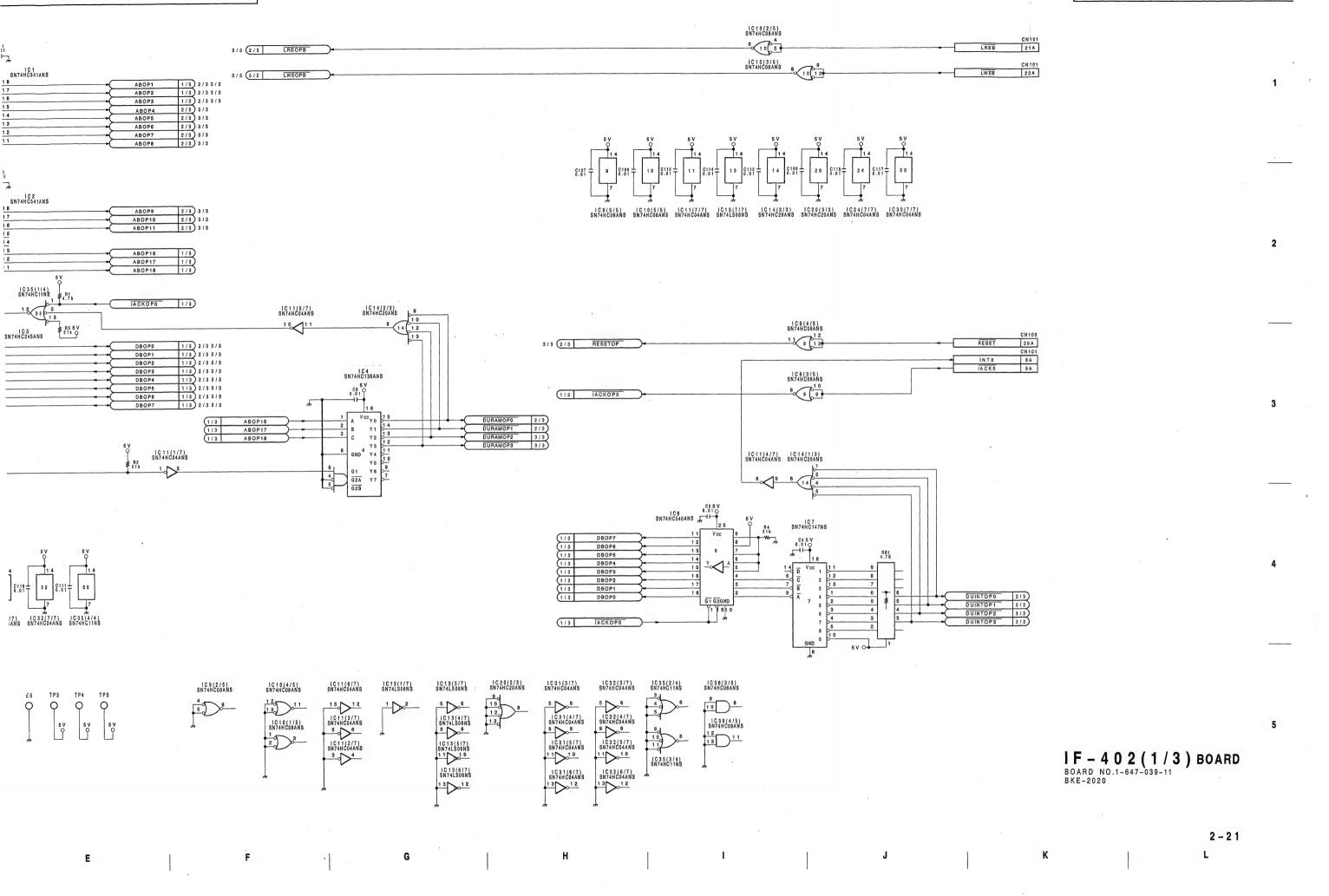




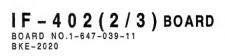


CF-47 BOARD BOARD NO.1-647-184-11 BKE-2031



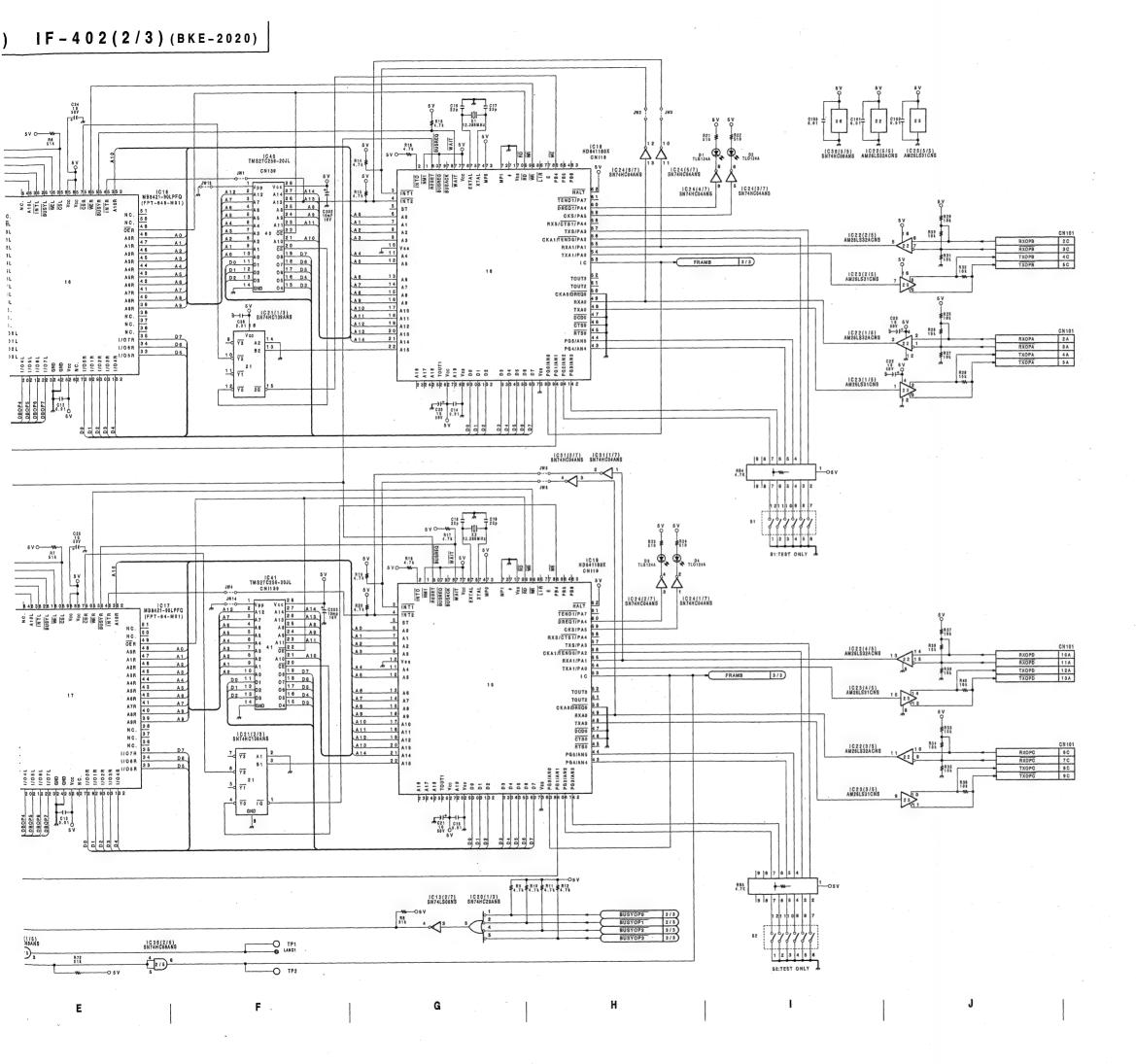


IF-402(2/3); RS422 I/F(Port G, H) HALT
TENDIPAT 6
CKS/PAS
RXS/CTST/PA4
TXS/PA3
CKA1/TENDO/PA2
RXA1/PA1 TXA1/PAG TOUTS 52
TOUT2 51
CKAO DREGO 50
RXAO 49
TXAO 44
DCDD 47
CTSO 45
RTSO 45
PGS/ANS 44
43 5 V 3 11 C38 0.01 6 DBOP0 DBOP1 DBOP2 1704L 1708L 1708L 1707L 9MD 9MD 700 NG. 1700R 1700R 1700R DRE01/PA4 5 9
CKS/PA5 5 9
RXS/CTS1/PA4 5 7
TXS/PA3 5 6
RXA1/FENDO/PA2 5 6
RXA1/PA1 5 4
TXA1/PA0 5 3 ABOP1
ABOP2
ABOP3
ABOP4
ABOP5
ABOP6
ABOP7
ABOP8
ABOP9
ABOP9 DBOP0 DBOP1 DBOP2 DBOP3 R9 R10 R11 R12 4.7k 4.7k 4.7k

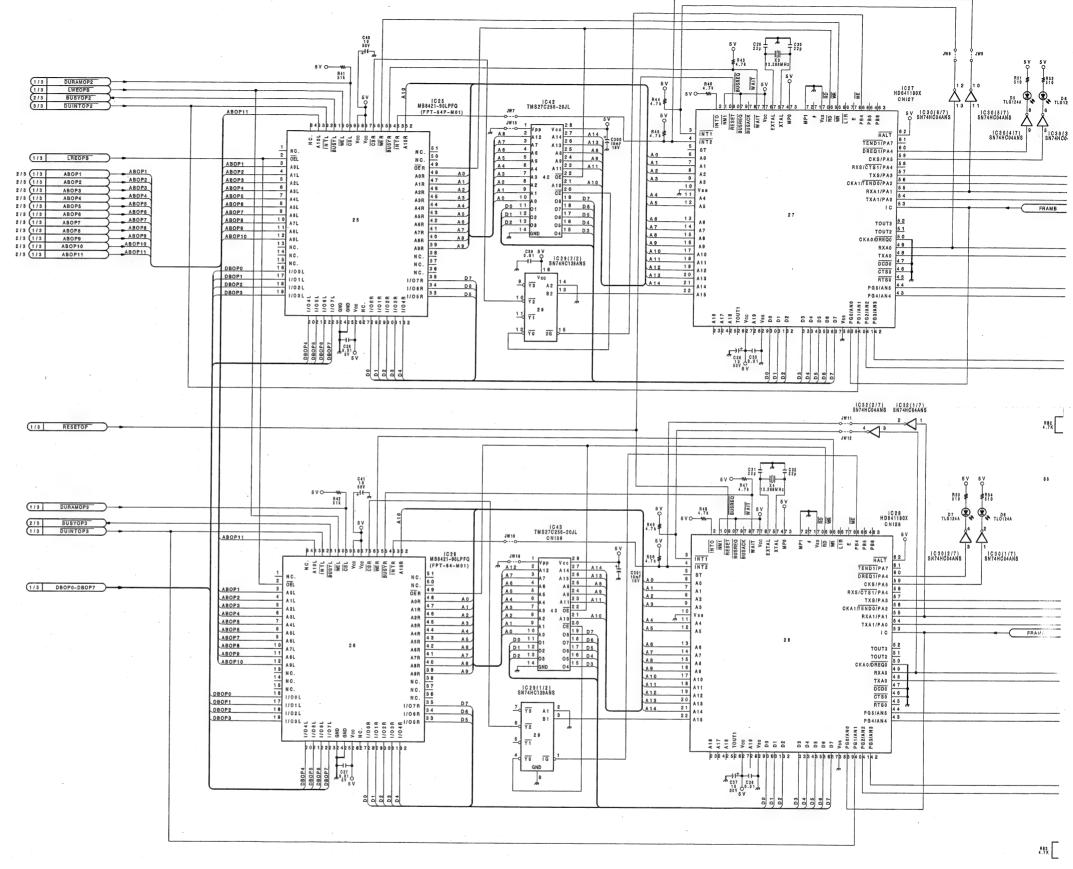


2 - 23

K | L







2 - 2 5

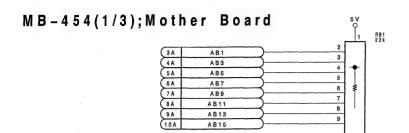
(BKE-2020) | F - 402(3/3)

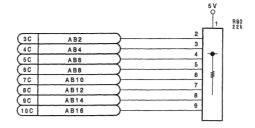
| F - 4 0 2 (3/3) BOARD
BOARD NO.1-647-039-11

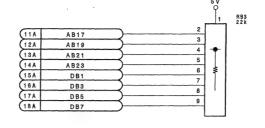
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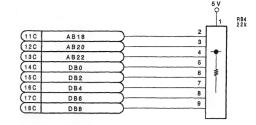
Z

MB-454(1/3) MB-454(1/3)











	CNC101(1/2)			CNC101(2/2)			
1 A	GND	(GND)	1 C	GND	(GND)		
2 A	RXOPA	CND787-24A	2 C	RXOPB	CND787-28A		
3 A	RXOPA	CND787-25A	3 C	RXOPB	CND787-29A		
4 A	TXOPA	CND787-26A	4 C	TXOPB	CND787-30A		
5 A	TXOPA	CND787-27A	5C	TXOPB	CND787-31A		
6 A	DURAMG	CNA101-6A	6C	RXOPC	CND788-2C		
7 A	BUSY	CNB100-2A	7C	RXOPC	CND788-3C		
8 A	INTO	CNA101-8A	8C	TXOPC	CND788-4C		
9 A	IACKO	CNA101-9A	9 C	TXOPC	CND788-5C		
10A	RXOPD	CND788-6C	10C	RXOPE	CND788-10C		
11A	RXOPD	CND788-7C	11C	RXOPE	CND788-11C		
12A	TXOPD	CND788-8C	12C	TXOPE	CND788-12C		
13A	TXOPD	CND788-9C	13C	TXOPE	CND788-13C		
14A			14C	RXOPF	CND788-14C		
15A			15C	RXOPF	CND788-15C		
16A			16C	TXOPF	CND788-16C		
17A			17C	TXOPF	CND788-17C		
18A	VD	CNA101-18A	18C	RXOPG	CND788-18C		
19A	FRAM	CNA101-19A	19C	RXOPG	CND788-19C		
20A			20C	TXOPG	CND788-20C		
21A	LREB	CNB101-21A	210	TXOPG	CND788-21C		
22A	LWEB	CNB101-22A	22C	RXOPH -	CND788-22C		
23 A			23C	RXOPH	CND788-23C		
24 A			24C	TXOPH	CND788-24C		
25 A			25C	TXOPH	CND788-25C		
26A			26C				
27 A			27C		-		
28A			28C				
29 A			29C	I/OIFOP	CNB101-29C		
30A			30C				
31A			31C				
32A	GND	(GND)	32C	GND	(GND)		

	CNB101(1/3) - CNB101(2/3			101(2/3)		CN	B101(3/3)	
1 A	GND	(GND)	1 B	RXD1	CNA101-26C	10	GND	(GND)
2 A	DURAMO	CNA101-2A	2 B	TXD1	CNA101-27C	2 C	RXE	CND786-2C
3 A	DURAM1	CNA101-3A	3 B	DURAM 3	CNA101-5A	3 C	RXE	CND786-3C
4 A	DURAM2	CNA101-4A	4 B	INTP 7	CNA101-12A	4 C	TXE	CND786-4C
5 A	RXA	CND787-2A	5 B	L;V1-DOUT	CND786-6A	5C	TXE	CND786-5C
6 A	RXA	CND787-3A	6 B	L;V1-COUT	CND786-7A	6C	RXF	CND786-6C
7 A	TXA	CND787-4A	7 B	L;V1-BOUT	CND786-8A	7C	RXF	CND786-7C
8 A	TXA	CND787-5A	8 B	L;V1-AOUT	CND786-9A	8C	TXF	CND786-8C
9 A	RXB	CND787-6A	9 B	L;A2-DOUT	CND786-10A	9 C	TXF	CND786-9C
10A	RXB	CND787-7A	10B	L;A2-COUT	CND786-11A	100	RTSF	CND786-10C
11A	TXB	CND787-8A	11B	L;A2-BOUT	CND786-12A	11C	TXDF	CND786-11C
12A	TXB	CND787-9A	12B	L;A2-AOUT	CND786-13A	120	CTSF	CND786-12C
13A	INT1	CNA101-10A	13B	L;A1-DOUT	CND786-14A	13C	RXDF	CND786-13C
14A	1/0 CS4	CNA101-14A	14B	L;A1-COUT	CND786-15A	14C	EXT MON 1	CND786-14C
15A	1/0 CS5	CNA101-15A	15B	L;A1-BOUT	CND786-16A	15C	EXT MON 2	CND786-15C
16A	IACK1	CNA101-11A	16B	L;A1-AOUT	CND786-17A	16C	LED	CND786-16C
17A	MUTE2	CN786-18C	17B	TTLOUT 1	CND786-18A	17C	MUTE 1	CND786-17C
18A	VD	CNA101-18A	18B	RELAY 1	CND786-19A	18C	VCA-1A	CND786-19C
19A	FRAM	CNA101-19A	19B	RETURN 1	CND786-20A	19C	VCA-1B	CND786-20C
20 A	NT/PAL	CNA101-20A	20B	TTLOUT 2	CND786-21A	20C	VCA-1C	CND786-21C
21 A	LREB	CNA101-21A	21B	RELAY 2	CND796-22A	21C	VCA-1D	CND786-22C
22 A	LWEB	CNA101-22A	22B	RETURN 2	CND786-23A	22C	VCA-2A	CND786-23C
23 A	REFCS	CNA101-23A	23B	TTLOUT 3	CND786-24A	23C	VCA-2B	CND786-24C
24 A	ODEN	CNA101-24A	24B	RELAY 3	CND786-25A	24C	VCA-2C	CND786-25C
25 A	RXC	CND787-10A	25B	RETURN 3	CND786-26A	25C	VCA-2D	CND786-26C
26A	RXC	CND787-11A ·	26B	TTLOUT 4	CND786-27A	26C	AGND	CND786-27C
27 A	TXC	CND787-12A	27B	RELAY 4	CND786-28A	27C	RXD	CND787-14A
28A	TXC	CND787~13A	28B	RETURN 4	CND786-29A	28C	TEST	CNA101-28C
29 A	RXD	CND787-15A	29B	TTLOUT 5	CND786-30A	29C	I/O IFOP	CNA101-29C
30 A	TXD	CND787-16A	30B	TTLOUT 6	CND786-31A	30C	38.4KX16	CNA101-30C
31A	TXD	CND787-17A	31B	TTLOUT 7	CND786-30C	31C		
32A	GND	(GND)	32B	TTLOUT 8	CND788-31C	32C	GND	(GND)

	C N A 1 0 1 (1/3)			CNA	101(2/3)
1 A	GND	(GND)	1 B		
2 A	DURAMO	CNB101-2A	2 B		
3 A	DURAM1	CNB101-3A	3 B		
4 A	DURAM2	CNB101-4A	4 B		
5 A	DURAM3	CNB101-3B	5 B	SPARE 1	CND781-5A
6 A	DURAMG	CNC101-6A	6 B	SPARE 2	CND781-6A
7 A	BUSY	CNB100-2A	7 B	SPARE 3	CND781-7A
8 A	INTO	CNC101-8A	8 B	SPARE 4	CND781-8A
9 A	TACKO	CNC101-9A	9 B	SPARE 5	CND781-9A
10A	INT1	CNB101-13A	10B	SPARE 6	CND781-10A
11A	IACK1	CNB101-16A	11B	SPARE 7	CND781-11A
12A	INTP 7	CNB101-4B	12B	SPARE 8	CND781-124
13A			13B	SPARE 9	CND781-13A
14A	1/0 CS4	CNB101-14A	14B		
15A	1/0 CS5	CNB101-15A	15B		
16A			16B		
17A			17B		
18A	VD	CNB101-18A	18B		
19A	FRAM	CNB101-19A	19B		
20A	NT/PAL	CNB101-20A	20 B		
21A	LREB	CNB101-21A	21 B		
22A	LWEB	CNB101-22A	22 B		
23A	REFCS	CNB101-23A	23 B		
24A	ODEN	CNB101-24A	24 B		
25 A	RTS 2	CND781-25A	25 B		
26A	TXD 2	CND781-26A	26 B		1
27A	RXD 2	CND781-27A	27 B		1
28A	RTS 0	CND781-28A	28B		1.
29A	TXD 0	CND781-29A	29B		
30A	CTS 0	CND781-30A	30B		
31A	RXD 0	CND781-31A	31B		
32A	GND	(GND)	32B		

CNC100(1/2)				CNC100(2/2)			
1A	GND	(GND)	10	GND	(GND)		
2 A			2 C				
3 A	AB1	CNB100-3A	3 C	AB2	CNB100-3C		
4 A	AB3	CNB100-4A	4 C	AB4	CNB100-4C		
5 A	AB5	CNB100-5A	5C	AB6	CNB100-5C		
6 A	AB7	CNB100-6A	6C	AB8	CNB100-6C		
7 A	AB9	CNB100-7A	7 C	AB10	CNB100-7C		
8 A	AB11	CNB100-8A	8C	AB12	CNB100-8C		
9 A	AB13	CNB100-9A	90	AB14	CNB100-9C		
10A	AB15	CNB100-10A	10C	AB16	CNB100-10C		
11A	AB17	CNB100-11A	11C	AB18	CNB100-11C		
12A	AB19	CNB100-12A	12C	AB20	CNB100-12C		
13A	AB21	CNB100-13A	13C	AB22	CNB100-13C		
14A	AB23	CNB100-14A	14C	DBO	CNB100-14C		
15A	DB1	CNB100-15A	15C	DB2	CNB100-15C		
16A	DB3	CNB100-16A	16C	DB4	CNB100-16C		
17A	DB5	CNB100-17A	17C	DB6	CNB100-17C		
18A	DB7	CNB100-18A	18C	DB8	CNB100-18C		
19A	DB9	CNB100-19A	19C	DB10	CNB100-19C		
20A	DB11	CNB100-20A	20C	DB12	CNB100-20C		
21A	DB13	CNB100-21A	21C	DB14	CNB100-21C		
22A	DB15	CNB100-22A	22C	ĀS	CNB100-22C		
23 A	UDS	CNB100-23A	23C	LDS	CNB100-23C		
24A	R /W	CNB100-24A	24C	FC0	CNB100-24C		
25 A	FC1	CNB100-25A	25C	FC2	CNB100-25C		
26A	BG	CNB100-26A	26C	BGACK	CNB100-26C		
27A	BR	CNB100-27A	27C				
28A			28C	DTACK	CNB100-28C		
29A	RESET	CNB100-29A	29C	HALT	CNB100-29C		
30A			30C				
31A	5 V	(5 V)	31C	5 V	(5 V)		
32A	5 V	(5 V)	32C	5 V	(5V)		

C N B 1 0 0 (1/2)				CNB100(2/2)			
1 A	GND	(GND)	10	GND	(GND)		
2 A	BUSY	CNA101-7A	2 C				
3 A	AB1	CNA100-3A	3 C	AB2	CNA100-3C		
4 A	AB3	CNA100-4A	4C	AB4	CNA100-4C		
5 A	AB5	CNA100-5A	5 C	AB6	CNA100-5C		
6 A	AB7	CNA100-6A	6C	AB8	CNA100-6C		
7 A	AB9	CNA100-7A	7 C	AB10	CNA100-7C		
8 A	AB11	CNA100-8A	8C	AB12	CNA100-8C		
9 A	AB13	CNA100-9A	90	AB14	CNA100-9C		
10A	AB15	CNA100-10A	10C	AB16	CNA100-10C		
11A	AB17	CNA100-11A	11C	AB18	CNA100-11C		
12A	AB19	CNA100-12A	12C	AB20	CNA100-12C		
13 A	AB21	CNA100-13A	13C	AB22	CNA100-13C		
14A	AB23	CNA100-14A	14C	DBO	. CNA100-14C		
15A	DB1	CNA100-15A	15C	DB2	CNA100-15C		
16A	DB3	CNA100-16A	16C	DB4	CNA100-16C		
17A	DB5	CNA100-17A	17C	DB6	CNA100-17C		
18A	DB7	CNA100-18A	18C	DB8	CNA100-18C		
19A	DB9	CNA100-19A	19C	DB10	CNA100-19C		
20A	DB11	CNA100-20A	20C	DB12	CNA100-20C		
21A	DB13	CNA100-21A	21C	DB14	CNA100-21C		
22A	DB15	CNA100-22A	22C	AS	CNA100-22C		
23 A	UDS	CNA100-23A	23C	LDS	CNA100-23C		
24 A	R /W	CNA100-24A	24C	FCO	CNA100-24C		
25 A	FC1	CNA100-25A	25 C	FC2	CNA100-25C		
26A	BG	CNA100-26A	26C	BGACK	CNA100-26C		
27 A	BR	CNA100-27A	27C				
28A			28C	DTACK	CNA100-28C		
29 A	RESET	CNA100-29A	29C	HALT	CNA100-29C		
30 A	-12V	(-12V)	30C	12V	(12V)		
31 A	5 V	(5 V)	31C	5 V	(5 V)		
32A	5 V	(5 V)	32C	5 V	(5 V)		

C N A 1 0 0 (1/2)			C N A 1 0 0 (2/2)			
1 A	GND	(GND)	10	GND	(GND)	
2 A			20			
3 A	AB1	CNB100-3A	3 C	AB2	CNB100-3C	
4 A	AB3	CNB100-4A	4 C	AB4	CNB100-4C	
5 A	AB5	CNB100-5A	5 C	AB6	CNB100-5C	
6 A	AB7	CNB100-6A	6 C	AB8	CNB100-60	
7 A	A B 9	CNB100-7A	7 C	AB10	CNB100-7C	
8 A	AB11	CNB100-8A	8 C	AB12	CNB100-8C	
9 A	AB13	CNB100-9A	9 C	AB14	CNB100-9C	
10A	AB15	CNB100-10A	10C	AB16	CNB100-10C	
11A	AB17	CNB100-11A	110	AB18	CNB100-11C	
12A	AB19	CNB100-12A	120	A B 2 0	CNB100-12C	
13A	AB21	CNB100-13A	13C	AB22	CNB100-13C	
14A	AB23	CNB100-14A	14C	DB0	CNB100-14C	
15A	DB1	CNB100-15A	15C	DB2	CNB100-15C	
16A	DB3	CNB100-16A	16C	DB4	CNB100-16C	
17A	DB5	CNB100-17A	17C	DB6	CNB100-17C	
18A	DB7	CNB100-18A	1 8 C	DB8	CNB100-18C	
19A	DB9	CNB100-19A	19C	DB10	CNB100-19C	
20A	DB11	CNB100-20A	20C	DB12	CNB100-20C	
21A	DB13	CNB100-21A	21C	DB14	CNB100-21C	
22A	DB15	CNB100-22A	22C	AS	CNB100-22C	
23A	UDS	CNB100-23A	23C	LDS	CNB100-23C	
24A	R/W	CNB100-24A	24C	FC0	CNB100-24C	
25A	FC1	CNB100-25A	25C	FC2	CNB100-25C	
26A	BG	CNB100-26A	26C	BGACK	CNB100-26C	
27A	BR	CNB100-27A	27C			
28A			28C	DTACK	CNB100-28C	
29A	RESET	CNB100-29A	29C	HALT	CNB100-29C	
30A	-12V	(-12V)	30C	1 2 V	(12V)	
31 A	5 V	(5 V)	31C .	5 V	(5V)	
32A	5 V	(5 V)	32C	5 V	(5V)	

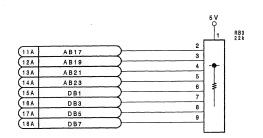
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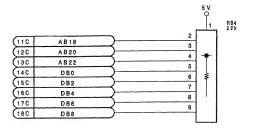
(GND)

(GND)

(GND)

(GND)





		5 V 0 1 RB5 22k
19A	DB9	2
20A	DB11	3
21A	DB13	
22A	DB15)

					1	R B 2 2
19C	DB10	$\overline{}$	 	2	-	
20C	DB12	=	 			
21C	DB14	$\overline{}$	 	- 5	T	

CNA101-2C

CNA101-3C

CNA101-4C

CNA101-5C

READY OUT

1 READY OUT
3 HED SELECT IN
5 READ DATA IN
7 WRITE PROTECT OUT
9 TRACK 00 OUT
11 WRITE GATE IN
13 WRITE DATA IN
15 STEP IN
17 DIR IN
19 MOTOR ON IN

CNB1	01(2/3)		CN	IB101(3/3)
RXD1	CNA101-26C	10	GND	(GND)
TXD1	CNA101-27C	2 C	RXE	CND786-2C
DURAM 3	CNA101-5A	3 C	RXE	CND786-3C
INTP 7	CNA101-12A	4 C	TXE	CND786-4C
L;V1-DOUT	CND786-6A	5 C	TXE	CND786-5C
L;V1-COUT	CND786-7A	6C	RXF	CND786-6C
L;V1-BOUT	CND786-8A	7 C	RXF	CND786-7C
L;V1-AOUT	CND786-9A	8 C	TXF	CND786-8C
L;A2-DOUT	CND786-10A	9 C	TXF	CND786-9C
L;A2-COUT	CND786-11A	10C	RTSF	CND786-10C
L;A2-BOUT	CND786-12A	110	TXDF	CND786-11C
L;A2-AOUT	CND786-13A	12C	CTSF	CND786-12C
L;A1-DOUT	CND786-14A	13C	RXDF	CND786-13C
L;A1-COUT	CND786-15A	14C	EXT MON 1	CND786-14C
L;A1-BOUT	CND786-18A	15C	EXT MON 2	CND786-15C
L;A1-AOUT	CND786-17A	16C	LED	CND786-16C
TTLOUT 1	CND786-18A	17C	MUTE 1	CND786-17C
RELAY 1	CND786-19A	18C	VCA-1A	CND786-19C
RETURN 1	CND786-20A	19C	VCA-1B	CND786-20C
TTLOUT 2	CND786-21A	20C	VCA-1C	CND786-21C
RELAY 2	CND796-22A	21C	VCA-1D	CND786-22C
RETURN 2	CND786-23A	22C	VCA-2A	CND786-23C
TTLOUT 3	CND786-24A	23C	VCA-2B	CND786-24C
RELAY 3	CND786-25A	24C	VCA-2C	CND786-25C
RETURN 3	CND786-26A	25 C	VCA-2D	CND786-26C
TTLOUT 4	CND786-27A	26C	AGND	CND786-27C
RELAY 4	CND786-28A	27C	RXD	CND787-14A
RETURN 4	CND786-29A	28C	TEST	CNA101-28C
TTLOUT 5	CND786-30A	29C	I/O IFOP	CNA101-29C
TTLOUT 6	CND786-31A	30C	38.4KX16	CNA101-30C
TTLOUT 7	CND786-30C	31 C		
TTLOUT 8	CND786-31C	32C	GND	(GND)

1		1 B	(GND)	GND	A
		2 B	CNB101-2A	DURAMO	A
		3 B	CNB101-3A	DURAM1	A
		4 B	CNB101-4A	DURAM2	A
CND781-5A	SPARE 1	5 B	CNB101-3B	DURAMS	A
CND781-6A	SPARE 2	6 B	CNC101-6A	DURAMG	A
CND781-7A	SPARE 3	7 B	CNB100-2A	BUSY	A
CND781-8A	SPARE 4	8 B	CNC101-8A	INTO	A
CND781-9A	SPARE 5	9 B	CNC101-9A	TACKO	A
CND781-10	SPARE 6	10B	CNB101-13A	INT1	A
CND781-11	SPARE 7	11B	CNB101-16A	IACK1	A
CND781-12	SPARE 8	12B	CNB101-4B	INTP 7	2A
CND781-13	SPARE 9	13B			BA
		14B	CNB101-14A	1/0 CS4	I A
		15B	CNB101-15A	1/0 CS5	i A
		16B			A
		17B			A
		18B	CNB101-18A	VD	A
		. 19B	CNB101-19A	FRAM	A
		20B	CNB101-20A	NT/PAL	A
		21B	CNB101-21A	LREB	A
		22B	CNB101-22A	LWEB	A
		23B	CNB101-23A	REFCS	BA
		24B	CNB101-24A	ODEN	A
		25B	CND781-25A	RTS 2	i A
		26B	CND781-26A	TXD 2	S A
		27B	CND781-27A	RXD 2	A
		28B	CND781-28A	RTS 0	A
		29B	CND781-29A	TXD 0	A
		30B	CND781-30A	CTS 0	A
		31B	CND781-31A	RXD 0	A
		32B	(GND)	GND	2 A

· CNA101(3/3)					
1 C	GND	(GND)			
2 C	READY	CN2-1			
3 C	HED SELECT	CN2-3			
4 C	READ DATA	CN2-5			
5 C	WRITE PROTECT	CN2-7			
6 C	TRACK 00	CN2-9			
7 C	WRITE GATE	CN2-11			
8 C	WRITE DATA	CN2-13			
9 C	STEP	CN2-15			
10C	DIRECTION	CN2-17			
11C	MOTOR ON	CN2-19			
12C	DRIVE SELECT 2	CN2-21			
13C	DRIVE SELECT 1	CN2-23			
14C	DRIVE SELECT 0	CN2-25			
15C	INDEX	CN2-27			
16C	DRIVE SELECT 3	CN2-29			
17C	IN USE	CN2-31			
18C	DISK CHANGE	CN2-33			
19C	DISK CHANGE RESET	CN2-34			
20C	RXKEY DATA	CND781-20C			
21C	RXKEY DATA	CND781-21C			
22C	TXKEY DATA	CND781-22C			
23C	TXKEY DATA	SND781-23C			
24C	DIAL PULSE	CND781-24C			
25 C	DIAL DIRECTION	CND781-25C			
26C	RXD1	CNB101-1B			
27C	TXD1	CNB101-2B			
28C	TEST	CNB101-28C			
29C	I/O IFOP	CNB101-29C			
30C	38.4KX16	CNB101-30C			
31 C	CRT OUT	CND781-31C			
32C	GND	(GND)			

	7	WRITE	PRO	TECT OUT	CNA101-5C		1	8	GND	(GND)	
-	9	TRA	CK	00 OUT	CNA101-6C		١	10	GND	(GND)	
	11	WRI	TE (ATE IN	CNA101-7C			1 2	GND	(GND)	
	13	WRI	TE I	DATA IN	CNA101	CNA101-8C			14	GND	(GND)
	1 5		STE	IN .	CNA101-9C		П	1 6	GND	(GND)	
	17		DIR	IN	CNA101	-10C			18	GND	(GND)
	19	МО	TOR	ON IN	CNA101	-110			2 0	GND	(GND)
	21	DRIVE	SEL	ECT 2 IN	CNA101	-120			2 2	GND	(GND)
	2 3			ECT 1 IN	CNA101	-13C			2 4	GND	(GND)
	2.5	DRIVE	SEI	ECT 0 IN	CNA101	-14C			2 6	GND	(GND)
	27	11	IDEX	OUT	CNA101	-15C		1	2 8	GND	(GND)
-	29	DRIVE	SEI	ECT 3 IN	CNA101	-16C			3 0	GND	(GND)
-	3 1	11	I US	E ON	CNA101	-17C		1	3 2	GND	(GND)
	3 3		CHA	NGE	CNA101	-18C		1	3 4	CHANGE RESET	CNA101-19C
		5 V								C	N1
								_	1	5 V	
								_	2	GND	1
		12V V					<u> </u>	_	3	GND	
			_					_	4	+ 12V	
								-		c	N3
		_				-	<u> </u>	\dashv	1	-12V	
		1	4			-		\dashv	2	+ 12V	
		-12V				١ ،	-	-[3	GND	
		- 1				-	 	\dashv	4	5 V	
				+ C1 + 330 # F	C2 C3 330# F 0.01 10V T 50V					. с	N 4
		1	-				-	-[1	-12V	
						-	-	\dashv	2	+ 12V	
						١ ٠	-	\dashv	3	GND	
					4		├	-[4	5 V	
				C5 + 0.01 50V	220g F 16V					c	N5
					-	L_		_	1	-12V	T
									,	-127	

C N 2 (2/2)

GND GND

		3	
REFIN		1	R
		2	
	(GND)		

C N B 1	00(2/2)
GND	(GND)
AB2	CNA100-3C
AB4	CNA100-4C
AB6	CNA100-5C
AB8	CNA100-6C
AB10	CNA100-7C
AB12	CNA100-8C
AB14	CNA100-9C
AB16	CNA100-10C
AB18	CNA100-11C
AB20	CNA100-12C
A B 2 2	CNA100-13C
DBO	CNA100-14C
DB2	CNA100-15C
DB4	CNA100-16C
DB6	CNA100-17C
DB8	CNA100-18C
DB10	CNA100-19C
DB12	CNA100-20C
DB14	CNA100-21C
AS	CNA100-22C
LDS	CNA100-23C
FC0	CNA100-24C
FC2	CNA100-25C
BGACK	CNA100-26C
DTACK	CNA100-28C
HALT	CNA100-29C
1 2 V	(12V)
5 V	(5 V)
	1 - 11 1

	CNA10	0(1/2)	CNA100(2/2)			
1A	1 A GND (GND)			GND	(GND)	
2 Å			2 C			
3 A	AB1	CNB100-3A	3 C	AB2	CNB100-3C	
4 A	A B 3	CNB100-4A	4 C	AB4	CNB100-4C	
5 A	AB5	CNB100-5A	5 C	AB6	CNB100-5C	
6 A	AB7	CNB100-6A	6C	AB8	CNB100-6C	
7 A	A 8 9	CNB100-7A	7 C	AB10	CNB100-7C	
8 A	AB11	CNB100-8A	8 C	AB12	CNB100-8C	
9 A	AB13	CNB100-9A	9 C	AB14	CNB100-9C	
10A	AB15	CNB100-10A	10C	AB16	CNB100-10C	
11A	AB17	CNB100-11A	110	AB18	CNB100-11C	
12A	AB19	CNB100-12A	12C	AB20	CNB100-12C	
13A	AB21	CNB100-13A	13C	AB22	CNB100-13C	
14A	AB23	CNB100-14A	14C	DB0	CNB100-14C	
15A	DB1	CNB100-15A	15 C	DB2	CNB100-15C	
16A	DB3	CNB100-16A	16C	DB4	CNB100-16C	
17.A	D B 5	CNB100-17A	17C	DB6	CNB100-17C	
18A	DB7	CNB100-18A	18C	DB8	CNB100-18C	
19A	DB9	CNB100-19A	19C	DB10	CNB100-19C	
20 A	DB11	CNB100-20A	20C	DB12	CNB100-20C	
21 A	DB13	CNB100-21A	21C	DB14	CNB100-21C	
22A	DB15	CNB100-22A	22C	AS	CNB100-22C	
23 A	UDS	CNB100-23A	23C	LDS	CNB100-23C	
24 A	R /W	CNB100-24A	24 C	FC0	CNB100-24C	
25 A	FC1	CNB100-25A	25 C	FC2	CNB100-25C	
26 A	8G	CNB100-26A	26C	BGACK	CNB100-26C	
27A	BR	CNB100-27A	27C			
28A			28C	DTACK	CNB100-28C	
29 A	RESET	CNB100-29A	29C	HALT	CNB100-29C	
30A	-12V	(-12V)	30C	1 2 V	(12V)	
31A	5 V	(5V)	31 C	5 V	(5V)	
32 A	5 V	(5 V)	32C	5 V	(5V)	

MB-454(1/3) BOARD BOARD NO.1-647-045-11 BVE-2000

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C6 F C7 0.01

LED LAMP

CND781-2C

MB-454(2/3); Mother Board

CND788(1/2)	<u> </u>		CND788	(2/2)	
1 A	GND	(GND)	1 C	GND	(GND)
2 A			2 C	RXOPC	CNC101-6C
3 A			3 C	RXOPC	CNC101-7C
4 A			4 C	TXOPC	CNC101-8C
5 A			5 C	TXOPC	CNC101-9C
6 A			6 C	RXOPD	CNC101-10A
7 A			7 C	RXOPD	CNC101-11A
8 A			8 C	TXOPD	CNC101-12A
9 A			9 C	TXOPD	CNC101-13A
1 0 A			10C	RXOPE	CNC101-10C
1 1 A			11C	RXOPE	CNC101-11C
1 2 A			12C	TXOPE	CNC101-12C
1 3 A			13C	TXOPE	CNC101-13C
1 4 A			14C	RXOPF	CNC101-14C
1 5 A			15C	RXOPF	CNC101-15C
1 6 A			16C	TXOPF	CNC101-16C
17A			17C	TXOPF	CNC101-17C
1 8 A			18C	RXOPG	CNC101-18C
19A			19C	RXOPG	CNC101-19C
2 0 A			20C	TXOPG	CNC101-20C
2 1 A			21 C	TXOPG	CNC101-21C
2 2 A			22C	RXOPH	CNC101-22C
23A			23 C	RXOPH	CNC101-23C
24A			24C	TXOPH	CNC101-24C
25A			25 C	TXOPH	CNC101-25C
26A			26 C		
27A			27 C		
28A			28 C		
29A			29 C		
30A			30C		
31A			31 C		
32A	GND	(GND)	32C	GND	(GND)

1 A	GND	(GND)	
2 A RXA		CNB101-5A	
3 A	RXA	CNB101-6A	
4 A	TXA	CNB101-7A	
5 A	TXA	CNB101-8A	
6 A	RXB	CNB101-9A	
7 A	RXB	CNB101-10A	
8 A	TXB	CNB101-11A	
9 A	TXB	CNB101-12A	
1 0 A	RXC	CNB101-25A	
11A	RXC	CNB101-26A	
12A	TXC	CNB101-27A	
13A	TXC	CNB101-28A	
14A	RXD	CNB101-27C	
15A	RXD	CNB101-29A	
16A	ŤXD	CNB101-30A	
17A	TXD	CNB101-31A	
18A			
19A			
20A			
21A			
22A			
23A			
24A	RXOPA	CNC101-2A	
2 5 A	RXOPA	CNC101-3A	
26A	TXOPA	CNC101-4A	
27A	TXOPA	CNC101-5A	
28A	RXOPB	CNC101-2C	
29A	RXOPB	CNC101-3C	
30A	TXOPB	CNC101-4C	
31A	TXOPB	CNC101-5C	
32 A	GND	(GND)	

1 C	GND	(GND)
2 C		
3 C		
4 C		
5 C		
6 C		
7C		
8 C		
9 C		
10C		
11C		
12C		
13C		
14C		
15 C		
16C		
17C		
18C		
19C		
20 C		
21 C		
22C		
23C		
24C		
25 C		
26C		
27 C		
28C		
29C		
30C		
31 C		
32C	GND	(GND)

CND	786(1/2)	CNE	786(2/2)	
1 A	GND	(GND)	1 C	GND
2 A			2 C	RXE
3 A			3 C	RXE
4 A			4 C	TXE
5 A			5 C	TXE
6 A	L;V1-DOUT	CNB101-5B	6 C	RXF
7 A	L;V1-COUT	CNB101-6B	7 C	RXF
8 A	L;V1-BOUT	CNB101-7B	8 C	TXF
9 A	L;V1-AOUT	CNB101-8B	9 C	TXF
10A	L;A2-DOUT	CNB101-9B	10C	RTSF
11A	L;A2-COUT	CNB101-10B	11 C	TXDF
12A	L;A2-BOUT	CNB101-11B	12C	CTSF
13A	L;A2-AOUT	CNB101-12B	13 C	RXDF
14A	L;A1-DOUT	CNB101-13B	14C	EXT MON 1
15A	L;A1-COUT	CNB101-14B	15 C	EXT MON 2
1 6 A	L;A1-BOUT	CNB101-15B	16C	LED
17A	L;A1-AOUT	CNB101-16B	17C	MUTE 1
18A	TTL OUT 1	CNB101-17B	18C	MUTE 2
19A	RELAY 1	CNB101-18B	19C	VCA-1A
20 A	RETURN 1	CNB101-19B	20C	VCA-1B
21A	TTL OUT 2	CNB101-20B	21 C	VCA-1C
22A	RELAY 2	CNB101-21B	22C	VCA-1D
23 A	RETURN 2	CNB101-22B	23 C	VCA-2A
24 A	TTL OUT 3	CNB101-23B	24C	VCA-2B
25 A	RELAY-3	CNB101-24B	25 C	VCA-2C
26 A	RETURN 3	CNB101-25B	26C	VCA-2D
27 A	TTL OUT 4	CNB101-26B	27 C	AGND
28 A	RELAY-4	CNB101-27B	28C	
29 A	RETURN 4	CNB101-28B	29 C	
30 A	TTL OUT 5	CNB101-29B	30 C	TTL OUT 7
31A	TTL OUT 6	CNB101-30B	31 C	TTL OUT 8
32 A	GND	(GND)	32 C	GND

		CND	787(2/2)	
GND	(GND)	1 C	GND	(GND)
RXA	CNB101-5A	2 C		
RXA	CNB101-6A	3 C		
TXA	CNB101-7A	4 C	•	
TXA	CNB101-8A	5 C		
RXB	CNB101-9A	6 C		
RXB	CNB101-10A	7 C		
TXB	CNB101-11A	8 C		
TXB	CNB101-12A	9 C		
RXC	CNB101-25A	10C		
RXC	CNB101-28A	11C		
TXC	CNB101-27A	12C		
TXC	CNB101-28A	13C		
RXD	CNB101-27C	14C		
RXD	CNB101-29A	15C		
TXD	CNB101-30A	16C		
TXD	CNB101-31A	17C		
		18C		
		19C		
		20C		
		21C		
		22C		
		23C		
XOPA	CNC101-2A	24C		
XOPA	CNC101-3A	25 C		
XOPA	CNC101-4A	26 C		
XOPA	CNC101-5A	27C		
XOPB	CNC101-2C	28 C		
XOPB	CNC101-3C	29 C		
XOPB	CNC101-4C	30 C		
XOPB	CNC101-5C	31 C		
GND	(GND)	32 C	. GND	(GND)

CND786(1/2)			CND786(2/2)			
1 A	GND	(GND)	1 C	GND	(GND)	
2 A			2 C	RXE	CNB101-2C	
3 A			3 C	RXE	CNB101-3C	
4 A			4 C	TXE	CNB101-4C	
5 A			5 C	TXE	CNB101-5C	
6 A	L;V1-DOUT	CNB101-5B	6 C	RXF	CNB101-6C	
7 A	L;V1-COUT	CNB101-6B	7 C	RXF	CNB101-7C	
8 A	L;V1-BOUT	CNB101-7B	8 C	TXF	CNB101-8C	
9 A	L;V1-AOUT	CNB101-8B	9 C	TXF	CNB101-9C	
10 A	L;A2-DOUT	. CNB101-9B	10C	RTSF	CNB101-10C	
11A	L;A2-COUT	CNB101-10B	11C	TXDF	CNB101-11C	
12A	L;A2-BOUT	CNB101-11B	12C	CTSF	CNB101-12C	
13A	L;A2-AOUT	CNB101-12B	13C	RXDF	CNB101-13C	
14A	L;A1-DOUT	CNB101-13B	14C	EXT MON-1	CNB101-14C	
15 A	L;A1-COUT	CNB101-14B	15 C	EXT MON 2	CNB101-15C	
16A	L;A1-BOUT	CNB101-15B	16 C	ĻED	CNB101-16C	
17A	L;A1-AOUT	CNB101-16B	17C	MUTE 1	CNB101-17C	
18A	TTL OUT 1	CNB101-17B	18C	MUTE 2	CNB101-17A	
19A	RELAY 1	CNB101-18B	19C	VCA-1A	CNB101-18C	
20 A	RETURN 1	CNB101-19B	20 C	VCA-1B	CNB101-19C	
21A	TTL OUT 2	CNB101-20B	21 C	VCA-1C	CNB101-20C	
22A	RELAY 2	CNB101-21B	22C	VCA-1D	CNB101-21C	
23A	RETURN 2	CNB101-22B	23 C	VCA-2A	CNB101-22C	
24A	TTL OUT 3	CNB101-23B	24C	VCA-2B	CNB101-23C	
25A	RELAY-3	CNB101-24B	25 C	VCA-2C	CNB101-24C	
26A	RETURN 3	CNB101-25B	26 C	VCA-2D	CNB101-25C	
27A	TTL OUT 4	CNB101-26B	27 C	AGND	CNB101-26C	
28A	RELAY-4	CNB101-27B	28 C			
29A	RETURN 4	CNB101-28B	29 C			
30A	TTL OUT 5	CNB101-29B	30 C	TTL OUT 7	CNB101-31B	
31A	TTL OUT 6	CNB101-30B	31 C	TTL OUT 8	CNB101-32B	
3 2 A	GND	(GND)	32C	GND	(GND)	

CND781(1/2)			CNI	CND781(2/2)		
1 A	GND	(GND)	1 C	GND	(GND)	
2 A			2 C	REF IN	CN7-1	
3 A			3 C			
4 A			4 C			
5 A	SPARE1	CNA101-5B	5 C			
6 A	SPARE2	CNA101-6B	6 C			
7 A	SPARE3	CNA101-7B	7 C			
8 A	SPARE4	CNA101-8B	8 C			
9 A	SPARE5	CNA101-9B	9 C			
10A	SPARE6	CNA101-10B	10C			
11A	SPARE7	CNA101-11B	110			
12A	SPARE8	CNA101-12B	12C			
13A	SPARE9	CNA101-13B	13C			
14A			14C			
15A			15C			
16A		. •	16C			
17A			17C			
18A	VD	CNA101-18A	18C			
19A	FRAM	CNA101-19A	19C			
20A			20C	RX KEY DATA	CNA101-20C	
21A			21C	RX KEY DATA	CNA101-21C	
22A			22C	TX KEY DATA	CNA101-22C	
23A			23C	TX KEY DATA	CNA101-23C	
24A	(CTS2)		24C	DIAL PULSE	CNA101-24C	
25A	(RTS2)	CNA101-25A	25 C	DIAL DIRECTION	CNA101-25C	
26A	TXD2	CNA101-26A	26C	12 V	(+12V)	
27A	RXD2	CNA101-27A	27C	1 2 V	(+12V)	
28A	RTSO	CNA101-28A	28.C	1 2 V	(+12V)	
29 A	TXDO	CNA101-29A	29C	. 12V	(+12V)	
30A	CTSO	CNA101-30A	30C			
31A	RXD0	CNA101-31A	31C	CRT OUT	CNA101-31C	
32A	GND	(GND)	32C	GND	(GND)	

M B - 4 5 4 (2/3) BOARD BOARD NO.1-647-045-11 BVE-2000

2 - 29

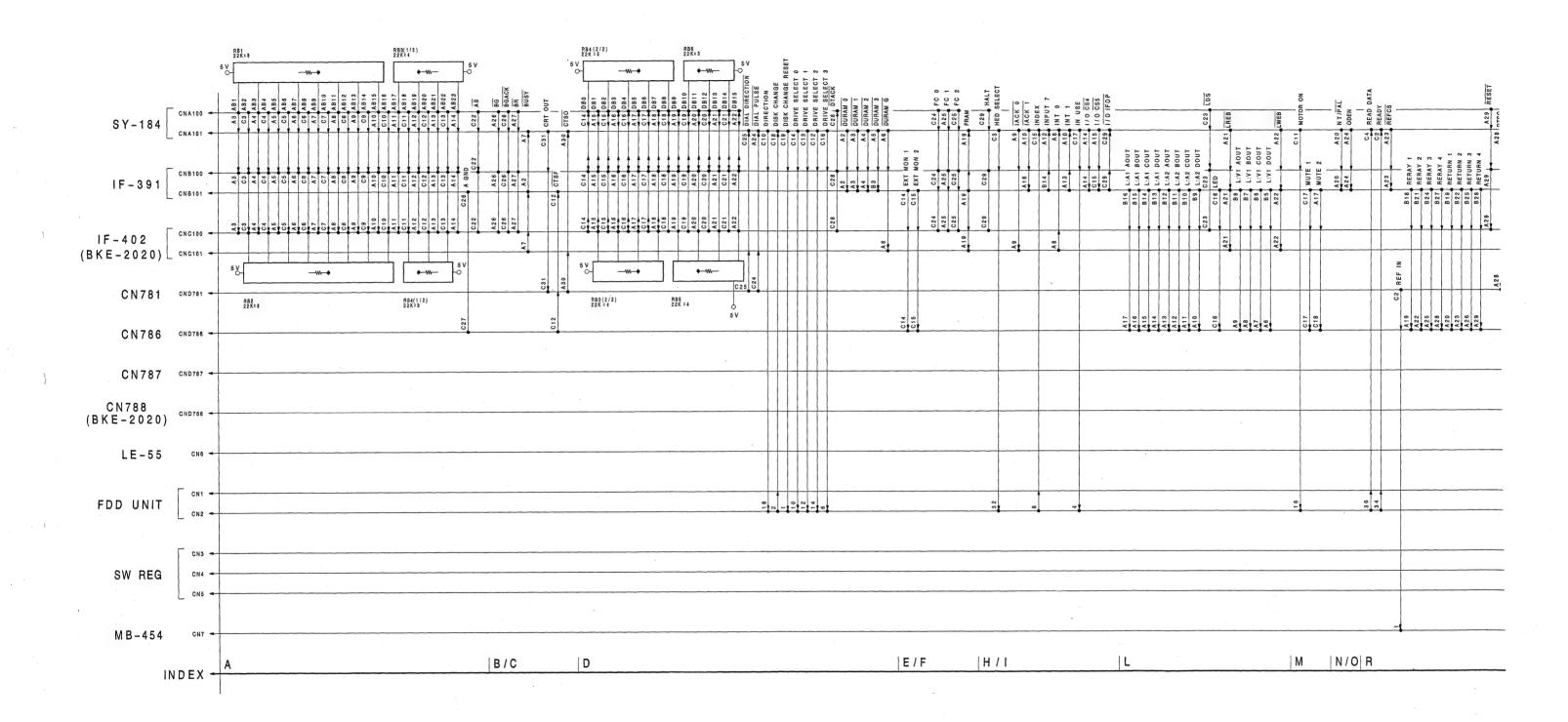
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MB-454(3/3); Mother Board



2-31 C D E F G H

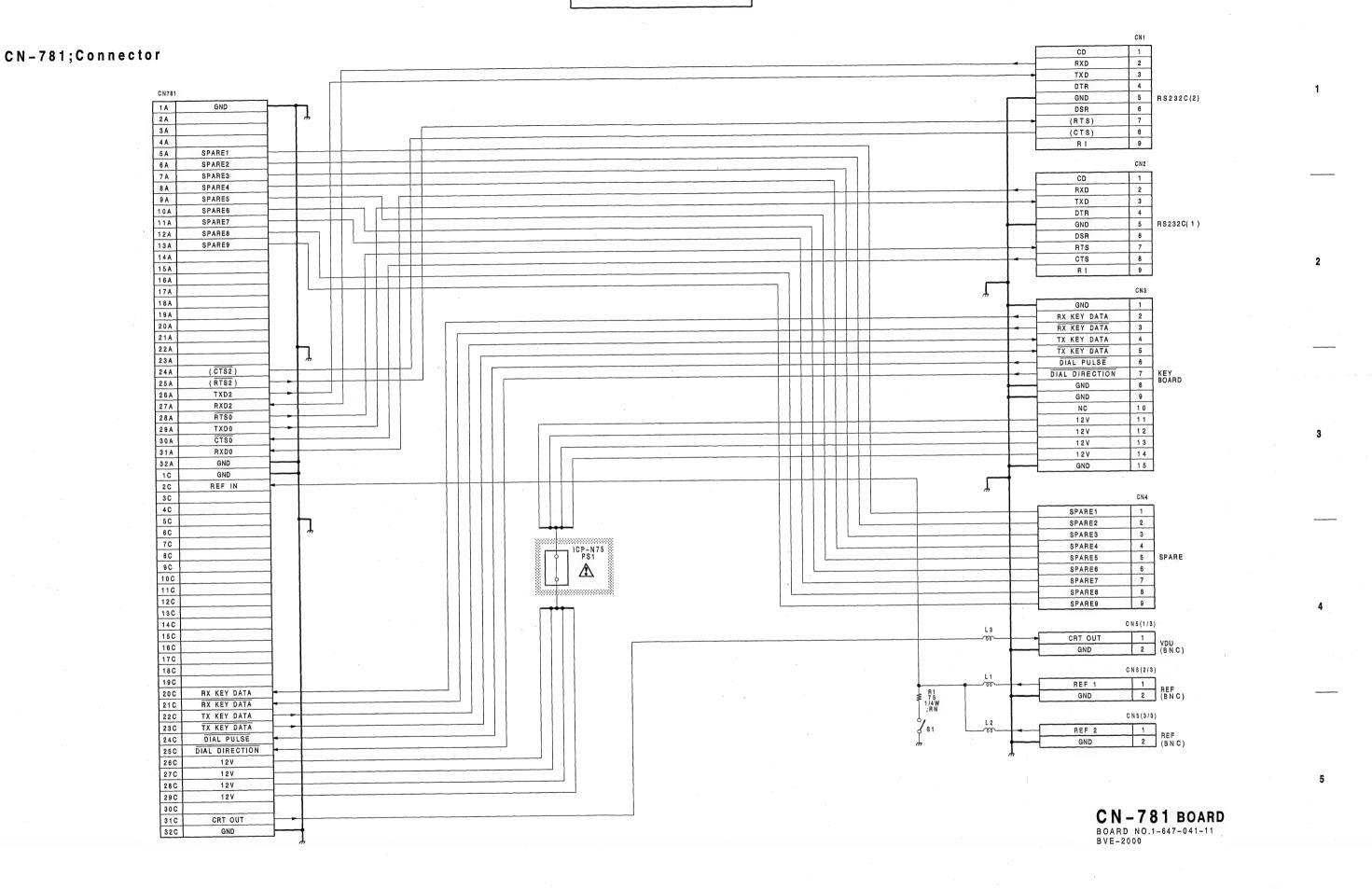
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IF-402 CNC101 (BKE-2020) A 29 C 22 C 23 - CND781 CN781 C26 C27 C28 C29 - CND786 CN786 - CND787 CN787 C6 π 220 μ (16 V) C4 m 220 µ (16 V) CN788 (BKE-2020) C5 /// 0.01 (50V) C7 m 0.01 (50V) LE-55 C3 m 0.01 (50V) FDD UNIT SW REG MB-454 + 12V |-12V + 5V U/V W S INDEX

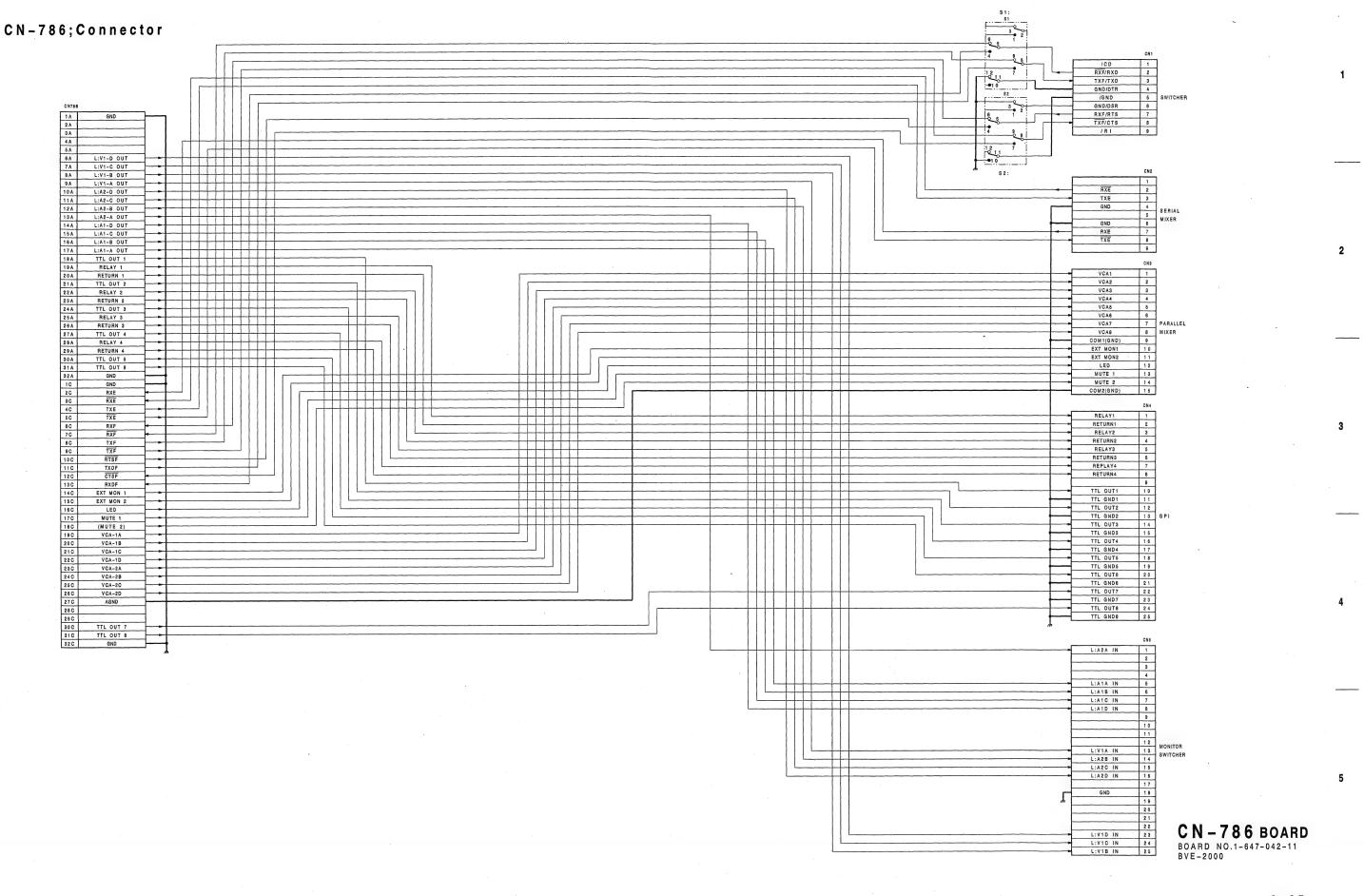
MB-454(3/3) BOARD BOARD NO.1-647-045-11 BVE-2000

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2 - 3 5

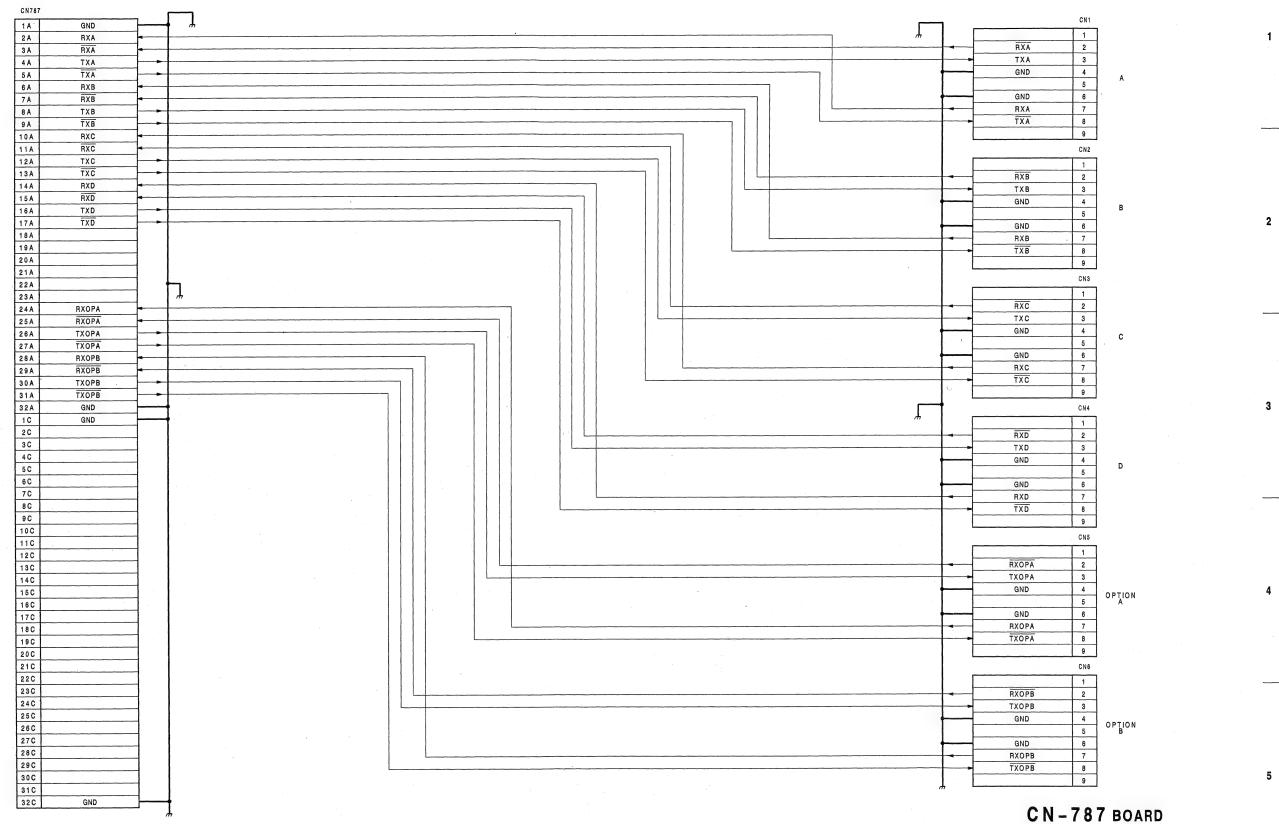
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CN-787; Connector

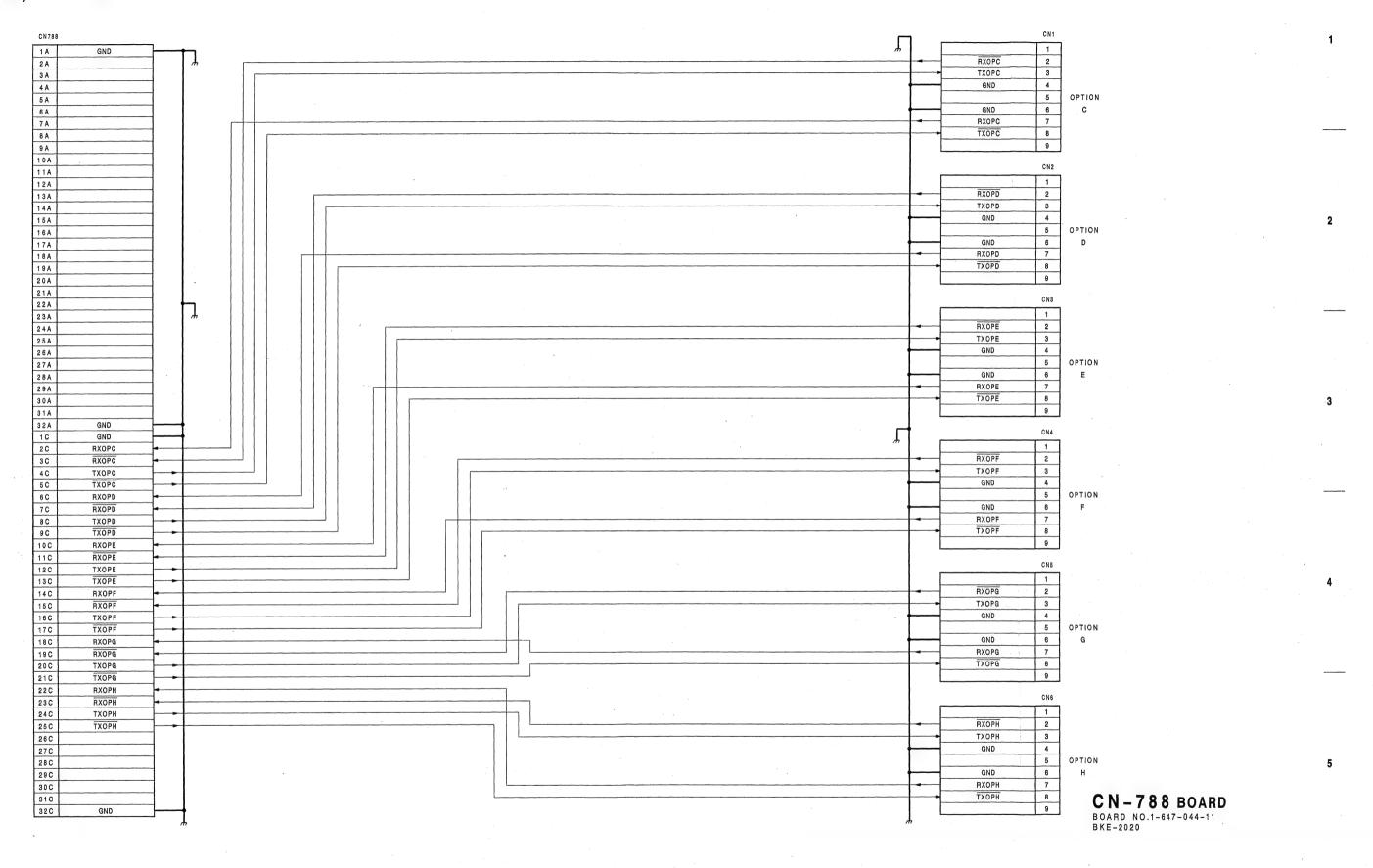


CN-787 BOARD BOARD NO.1-647-043-11 BVE-2000

2 - 3 7

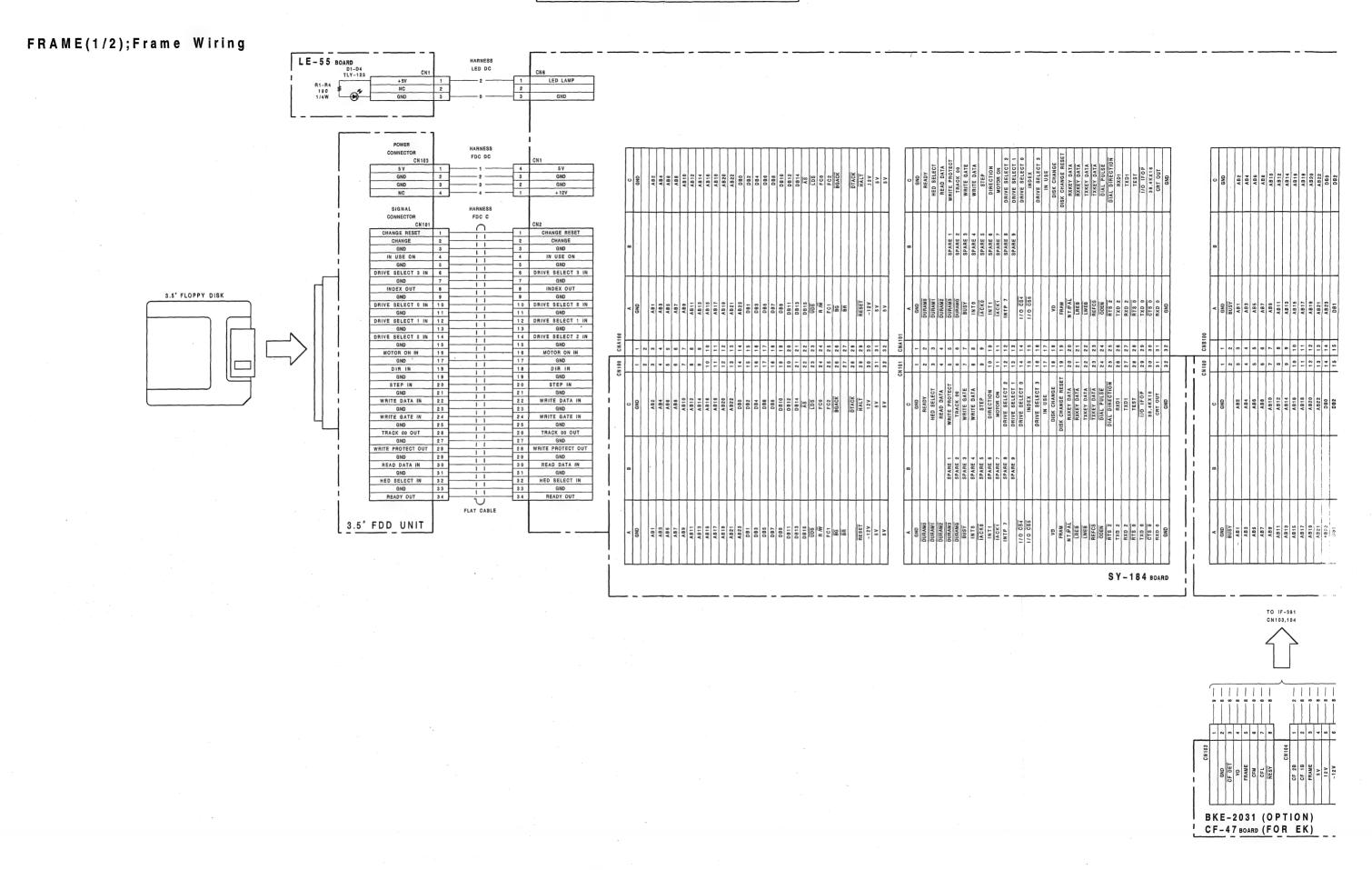
2 – 3 7

CN-788;Connector



2 - 3 9

2 - 39



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			1
		MB-454 BOARD (1 / 2)	1
AB6 AB6 AB6 AB12 AB12 AB14 AB14 AB14 AB14 AB16 DB2 DB2 DB2 DB2 DB4 DB14 DB14 AS LD8 FC0 FC0 FC0 FC0 FC0 FC0 FC0 FC	RXD1	SX OPP FX OPP	2
AB1 AB2 3 3 AB1 AB5 AB6 6 AB3 AB7 AB1 6 6 AB2 AB1 AB1 6 6 AB1 AB1 AB1 9 8 AB1 AB1 AB1 9 8 AB1 AB1 AB1 10 AB1 AB1 AB1 AB1 11 11 AB1 AB1 AB1 AB1 AB1 AB1 AB1 AB1 AB1 AB1 AB1 AB2 AB2 AB1 AB1 AB1 AB2 AB2 AB2 AB2 AB2 AB2 AB2 AB2 AB2 A	No.	A	3
TO IF-391 CN103,104 CN103,104 TO IF-391 CN103,104	DR BKE-2030 (OPTION)	BKE-2020 (OPTION) IF-402 BOARD	FRAME WIRING(1/2)

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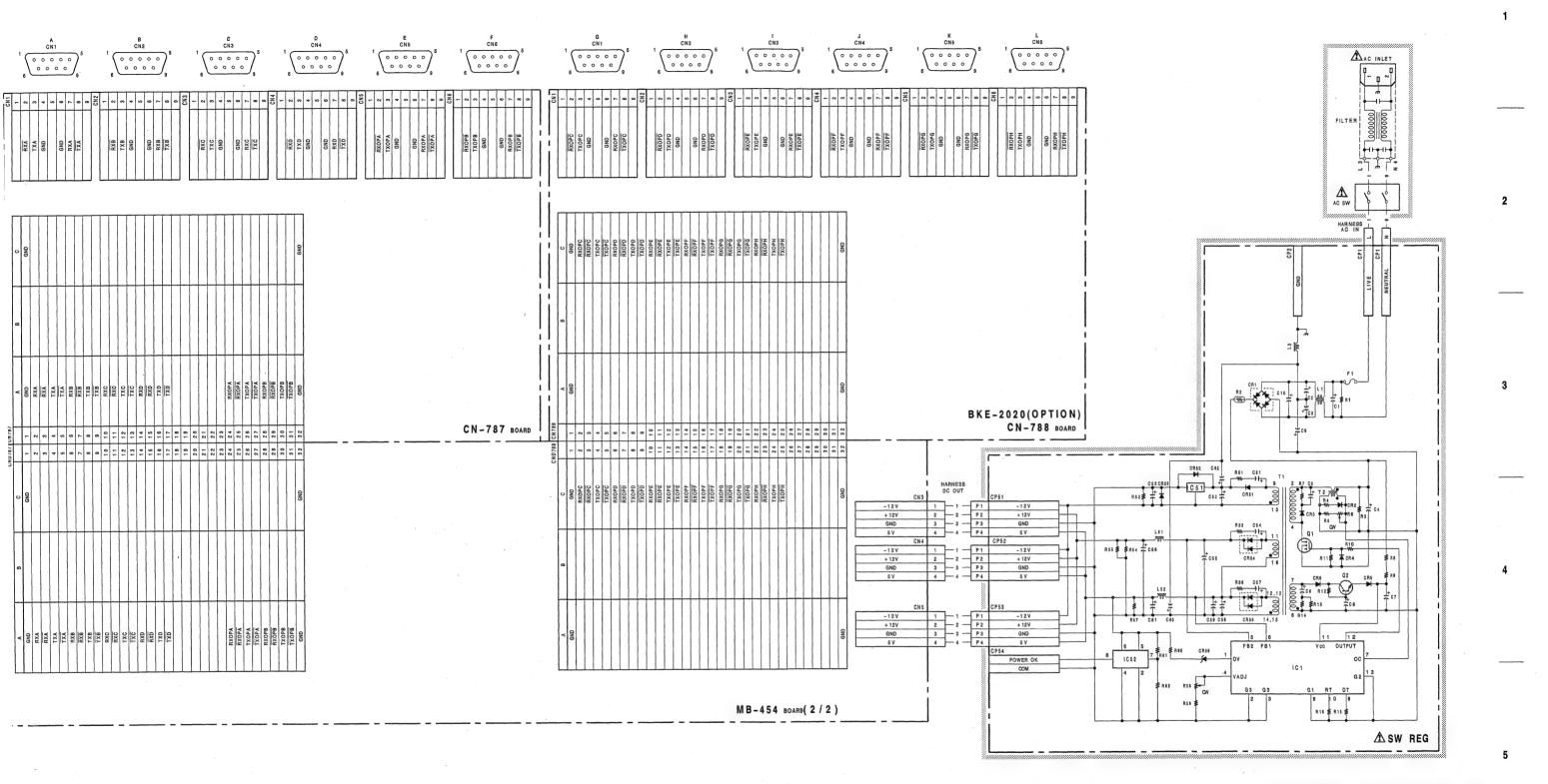
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FRAME(2/2);Frame Wiring

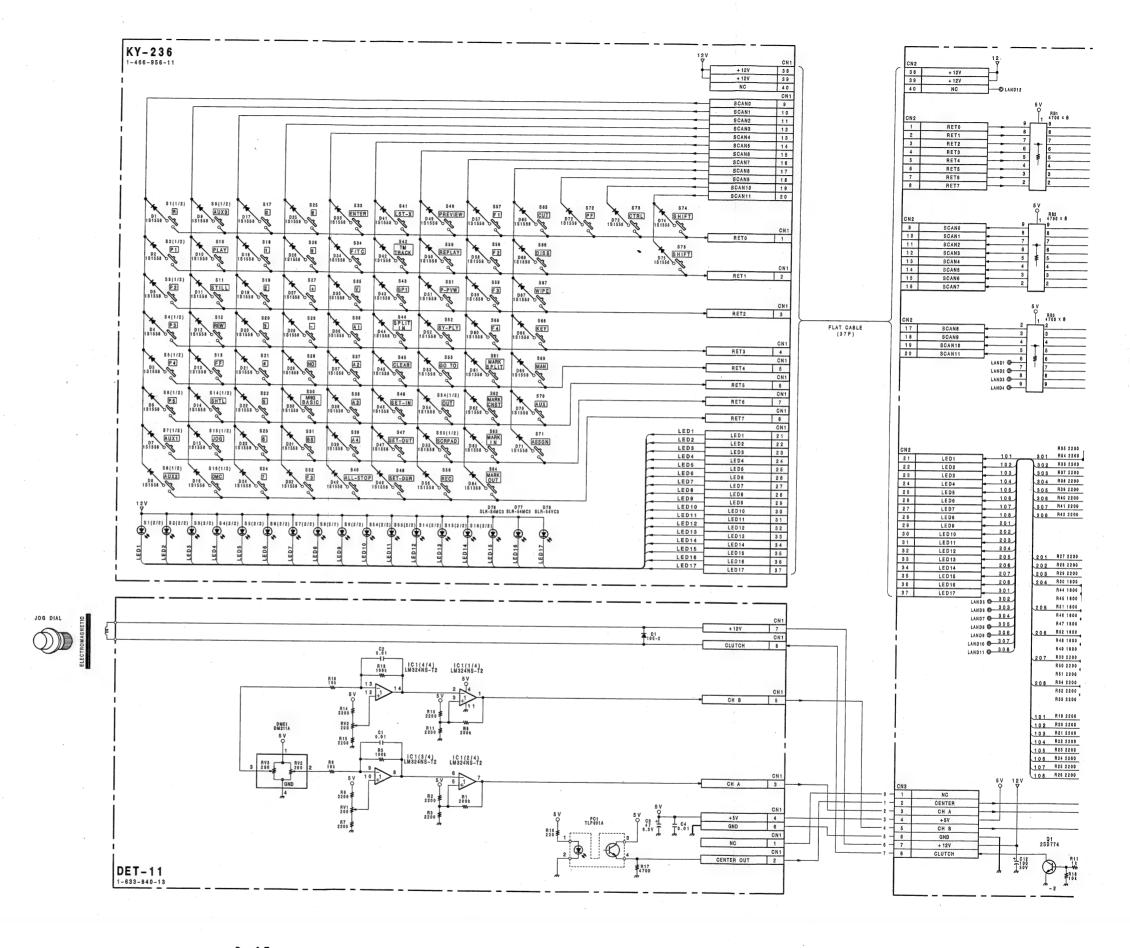
RS-232C(1) CN2 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SPARE CN4 1 CN5 CN5 CN5 CN5 CN5 CN5 CN5	SWITCHER CN1 1	SERIAL MIXER CN2 1 0 0 0 0 0 6 9	PARALLEL MIXER CNS O O O O O O O O O O O O O O O O O O O	GPI CN4 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MONITOR SWITCHER CNS 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1
CM2 CM2 CM2 CM3		FXFRXO 2 1 1 1 1 1 1 1 1 1		VCA2 VCA3 VCA4 VCA4 VCA6 VCA6 VCA6 VCA6 VCA7 VCA7 VCA7 VCA8 COMI(GND) EXT MON1 LED LED MUTE 14 COM2(GND) 15	RELAY2 2 RELAY2 3 RELAY2 3 RELAY2 6 RELAY3 6 RETURN3 6 RETURN4 9 RETURN4 8 RETURN4 1 TIL OUT1 11 TIL OUT2 12 TIL OUT3 14 TIL OUT3 18 TIL OUT3 18 TIL OUT3 18 TIL OUT3 18 TIL OUT3 22 TIL OUT3 22	L; A1A IN 6 L; A1B IN 6 L; A1D IN 8 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	CM 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
B C C C C C C C C C		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		VGA-10 VGA-10 VGA-10 VGA-28 VGA-20 VGA-20 VGA-20 AGNO TTL OUT 7			ON 9
1 1 1 GND 2 2 2 3 3 4 4 3 4 4 4 3 5 5 5 SPARE! 5 6 6 8 SPARE! 7 7 SPARE! 10 10 10 SPARE 10 10 SPARE 11 11 SPARE 11 11 SPARE 11 11 SPARE 12 12 SPARE 13 12 SPARE 14 14 14 SPARE 15 10 10 SPARE 16 16 (GSZ) 17 11 SPARE 18 18 18 18 18 SPARE 18 18 18 18 SPARE 18 18 18 SPARE 19 10 SPARE 10 SPA	CN-781 BOARD 92.00	- 2 8 4 5 6 7 6 8	0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 2 7 11 001 2 2 2 2 RELAY2 2 3 2 3 RETURN 2 2 4 2 7TL 001 3 2 5 2 6 RELAY3 2 5 2 7TL 001 4 2 8 2 8 RELAY4 2 8 2 8 RELAY4 2 8 2 8 TRUNN 4 3 1 7TL 001 6 3 3 2 GND		CN-786 BOARD	1 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
REF IN R	CONO		#175F TXOF TXOF TXOF 1 CTSF EXT MON 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				OND COND
A 600 GND SPARE1 SPARE2 SPARE2 SPARE3 SPARE4 SPARE4 SPARE6 SPARE9 SP		A B GHO GHO L:V1-00UT L:V1-0UT L:	LAZ-0007 LAZ-0007	TIT. OUT 2 RELVA2 RETURN 2 TIT. OUT 3 RELVA3 RELVA4 RELVA4 RELVA4 RELVA4 RELVA4 RELVA4 RELVA4 RELVA4 RELVA4 RELVA 8 RTL OUT 8 TTL OUT 8 GND			A B GWD GWD RAA RAA RAA RAA RAA RAA RAA RAA RAA RA

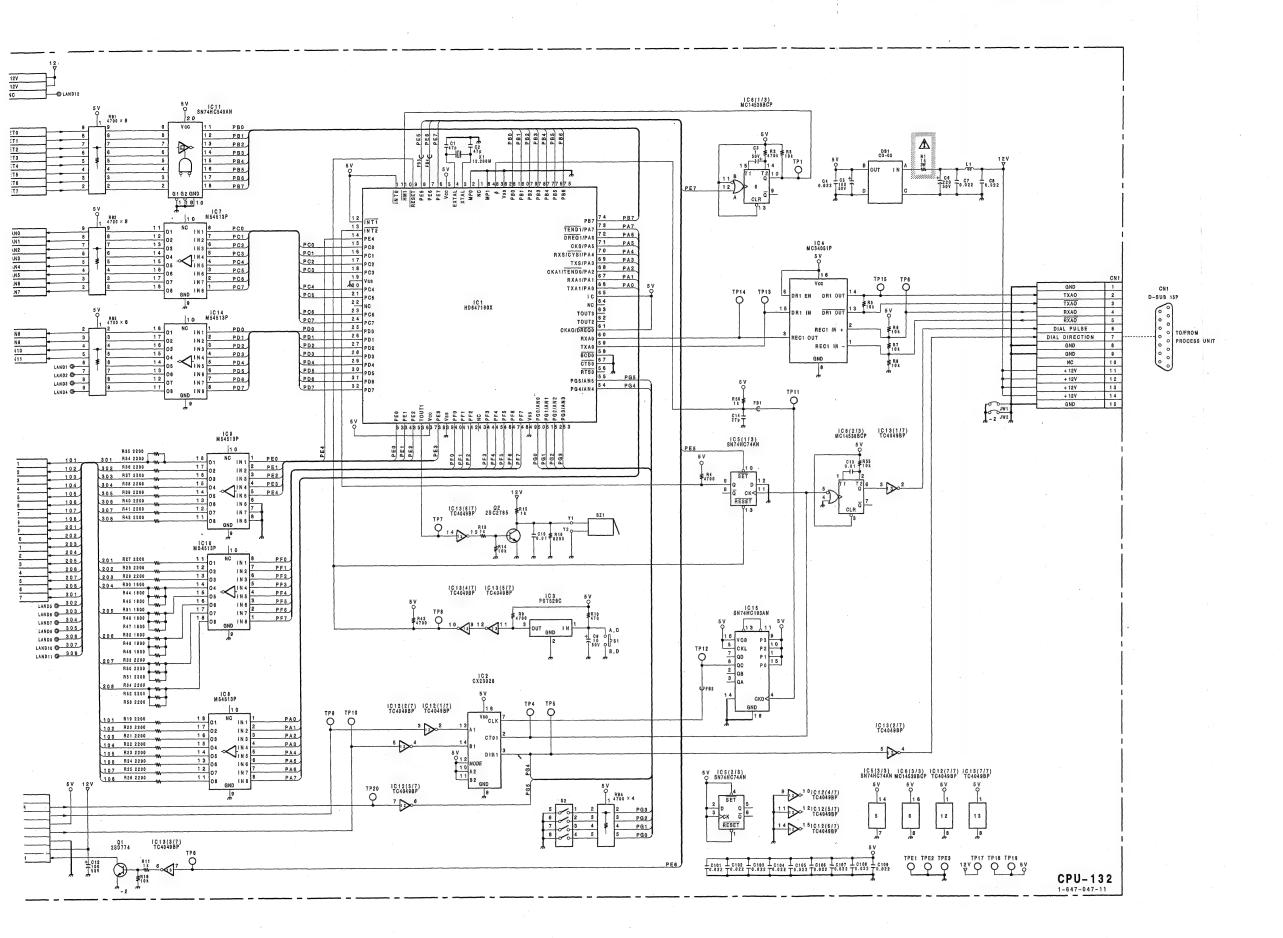


FRAME WIRING(2/2)

2 - 43

CONTROL PANEL
CPU-132; Keyboard Controller
DET-11; Search Dial Detector
KY-236; Keyboard





CONTROL PANEL

CPU-132 BOARD DET-11 BOARD KY-236 BOARD BKE-2010

2 - 4 5

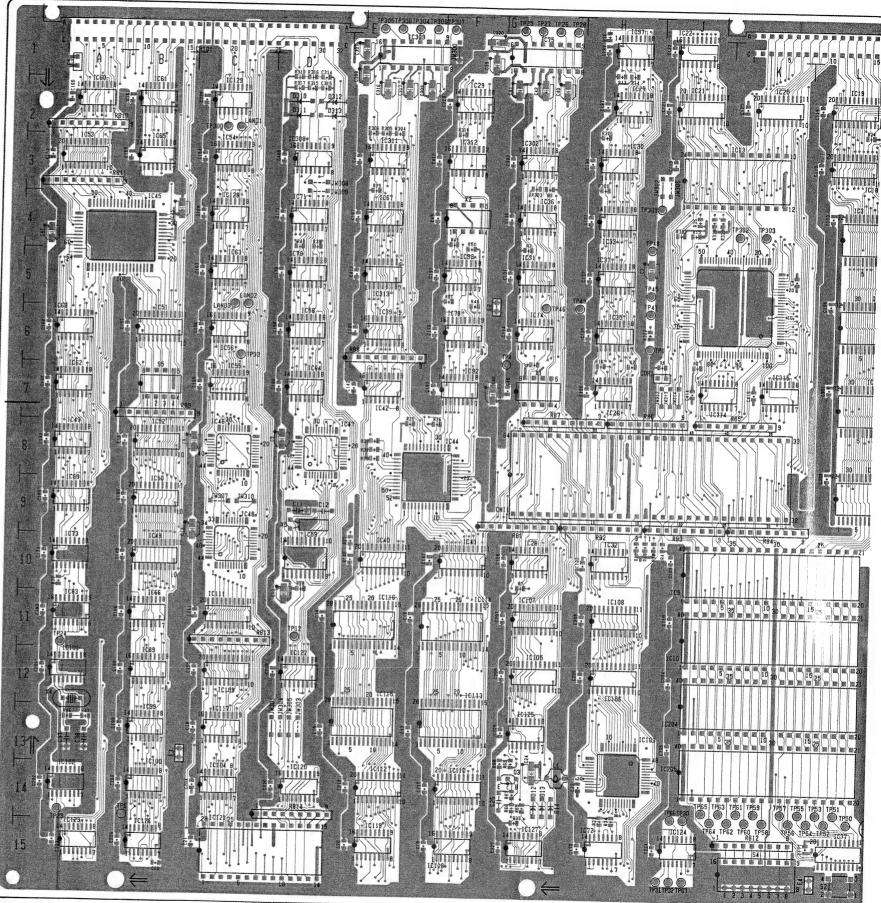
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SECTION 3 BOARD LAYOUTS

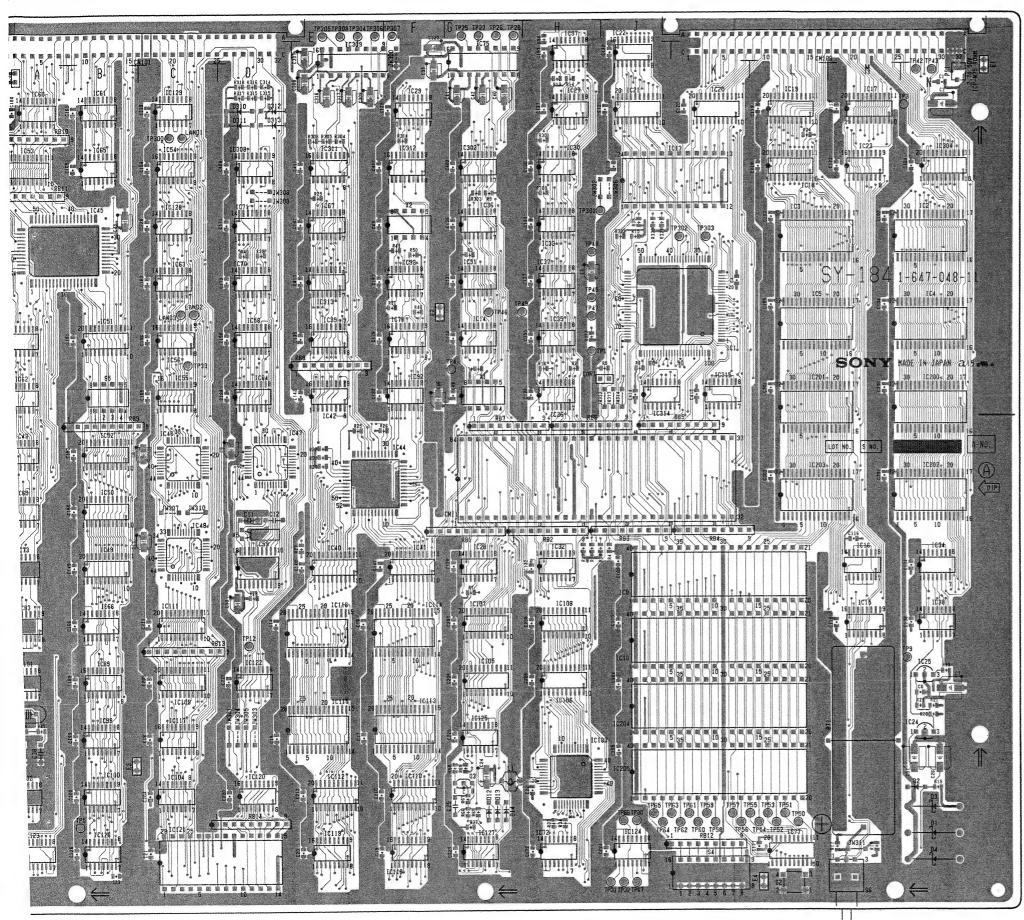
Board	Function	Page
CF-46 (BKE-2030)	NTSC Color Framing Detector ·····	3 - 6
CF-47 (BKE-2031)	PAL Color Framing Detector	3 – 7
CN-781	Connector	3 - 12
CN-786	Connector	
CN-787	Connector	··3 - 1 4
CN-788 (BKE-2020)	Connector	
CPU-132(BKE-2010)	Keyboard Controller	
DET-11 (BKE-2010)	Search Dial Detector	
IF-391	Interface	
IF-402 (BKE-2020)	9 PIN Interface ····	
LE-55	Power Indicator ·····	
M B – 4 5 4	Mother board ····	
SY-184	Main CPU ····	3 - 2

SY-184(1-647-048-	-11)

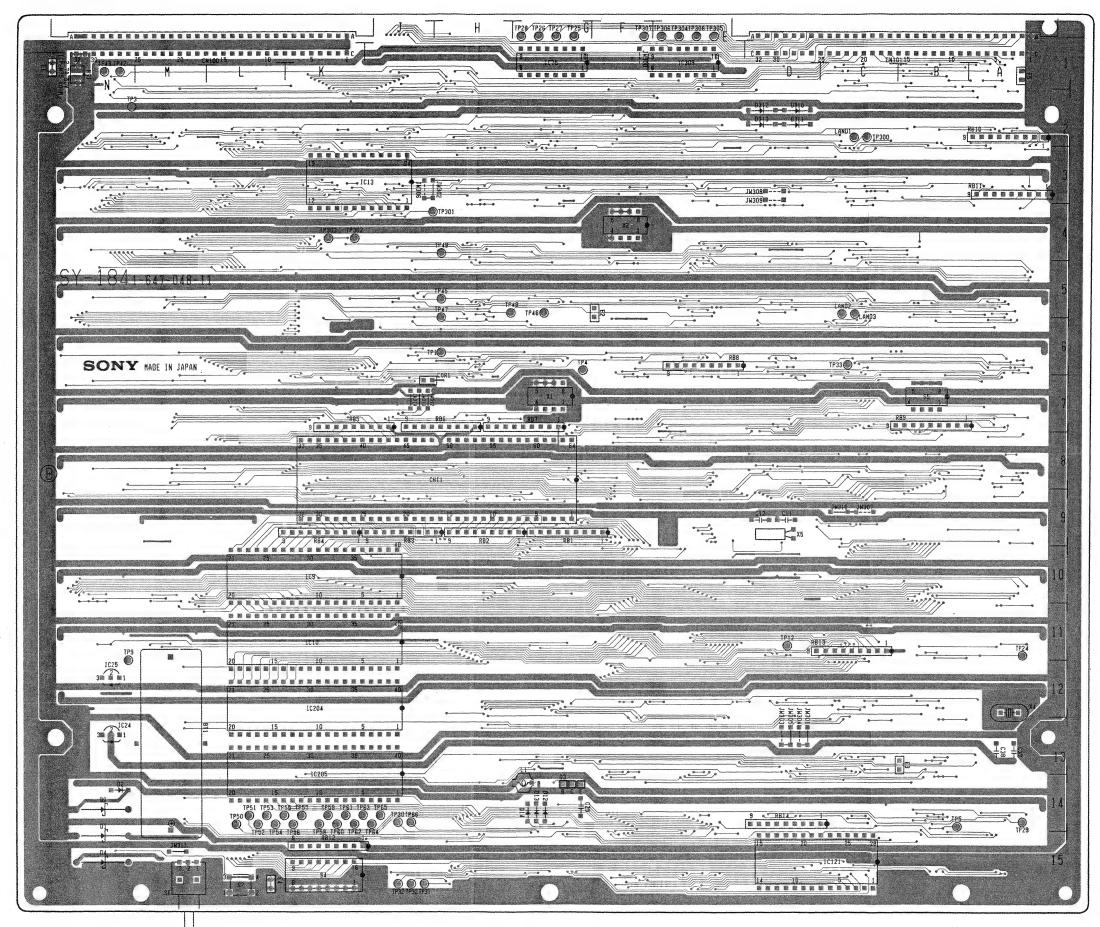
B T 1	M – 13	I C 2 7	H – 2	IC97	H – 1	JW 314	J – 7	TP54	L – 1 :
	_	I C 2 8	G – 10	IC99	B - 13			TP55	L-14
C N I 1	G – 9	IC29	F – 2	IC100	B – 13	PS1	N – 1	TP56	K-15
CN19	J – 1 0	IC30	H – 3	IC101	A - 12			TP57	K-14
CNI10		I C 3 1	G – 5	IC102		Q3	G-14	TP58	K – 15
CNI12		IC32	H – 10	IC103	H – 13		<u> </u>	TP59	K – 14
CNI20		IC33	H – 4	IC104	C-14	RB1	G – 9	TP60	K-14
C N I 2 0	5 J-13	IC34	N – 10	IC105	G-12	RB2	H – 9	TP61	
		IC35	H – 6	IC106	H-12	RB3	J – 9	TP62	K – 14 K – 15
CN100		IC36	G – 4	IC107	G-11	RB4	K – 9	TP63	J-14
CN101	C – 1	IC37	H – 5	IC108	H – 11	RB5	K - 7	TP64	J-14
		IC38	N – 1 1	IC109	C-12	RB6	H – 7	TP65	
COR1	H – 7	IC39	E – 6	IC110	F-14	RB7	G – 7	TP66	J – 14 J – 14
		IC 4 0	E – 10	IC111	C-11	RB8	E - 6	TP67	J - 14
D 1	N - 1 4	IC 4 1	F-10	IC112	E-14	RB9	B - 7	TP300	0-15 C-2
D 2	N – 1 4	IC42	E – 6	IC113	F-12	RB10	A – 2	TP301	H – 4
D 3	N – 1 4	IC43	A - 8	IC114	F-11	RB11	A – 3	TP301	п – 4 К – 4
D 4	N – 15	IC44	F – 8	IC115	E-12	RB12	K – 15	TP303	K – 4
D 1 2	G – 14	IC 45	B – 4	IC116	E-11	RB13	C-11	TP304	E – 1
D 1 3	G – 14	IC 46	C - 8	IC117	C-13	RB14	D-14	TP304	E-1
D 1 4	G – 14	IC 47	E – 8	IC118	F-15		5 14	TP306	E-1
D310	D - 2	IC48	C - 9	IC119	E-15	S 2	L - 15	TP307	
D 3 1 1	D – 2	IC49	B – 10	IC120	D-14	S 4	K – 15	TP307	F-1
D312	D – 2	IC50	B – 9	IC121	C-14	S 5	B - 7	1 - 3 0 6	E – 1
D 3 1 3	D – 2	IC51	B – 6	IC122	D-12	S 6	M - 15	X 1	0 7
		IC52	B - 8	IC123	A - 15			X 2	G – 7 F – 4
E 1	N – 1	IC53	A – 3	IC124	J - 15	TP1	H – 6	X 4	A – 12
E 2	F – 5	IC54	C – 3	IC125	G-13	TP3	N - 2	X 5	D-9
E 3	B – 13	I C 5 5	C – 7	IC126	B – 15	TP4	G - 6	λ 3	D-9
E 4	L – 15	IC 5 6	C – 6	IC127	G - 15	TP5	B - 14		
E 5	A – 1	IC58	D – 6	IC128	C - 4	TP9	N – 1 1		
		IC59	D – 9	IC129	C - 2	TP12	D-11		
I C 1	K – 6	IC60	A – 2	IC200	N – 7	TP24	A – 11		
I C 2	N – 4	IC 61	B – 2	IC201	L - 7	TP25	G – 1		
I C 3	L – 4	IC62	A – 7	IC202	N – 8	TP26	G – 1		
I C 4	L – 4	IC 63	C – 5	IC203	L – 8	TP27	G – 1		
I C 5	L – 5	IC64	D – 6	IC302	G – 3	TP28	G - 1		
I C 9	J – 10	IC65	B – 3	IC304	N – 3	TP29	A – 14		
IC10	J – 12	IC 6 6	B – 1 1	1C308	D - 3	TP30	J – 1 4		
IC13	K – 3	IC 67	E – 4	IC309	E-1	TP31	J – 15		
IC14	G – 6	IC68	A – 6	IC311	E – 3	TP32	J – 15		
IC15	M – 1 1	IC 6 9	A – 9	IC312	F - 3	TP33	C – 6		
IC16	M – 1 0	IC70	D – 5	IC313	E – 5	TP42	N - 1		
IC17	M – 2	IC71	D – 4	IC314	J – 7	TP43	N – 1		
IC18	L - 3	IC72	H – 15	IC315	K – 7	TP45	H – 5		
IC19	L – 2	IC73	A – 1 0			TP46	G – 5		
I C 2 0	K – 2	IC75	G – 1	JW301	D – 13	TP47	H – 5		
1021	J – 2	1 C 7 7	L-15	JW302	H – 3	TP48	H – 4		
I C 2 2	J – 1	IC78	F – 6	JW305	D - 13	TP49	G - 5		
1 C 2 3	M – 3	IC83	A – 1 1	JW310	C - 9	TP50	L-14		
I C 2 4	N – 13	IC89	B – 12	JW311	M - 15	TP51	L – 14		
IC25	N - 12	IC92	F - 6	JW312	H – 7	TP52	L-15		
IC26	H – 7	IC93	F – 5	JW313	J - 7	TP53	L-14		



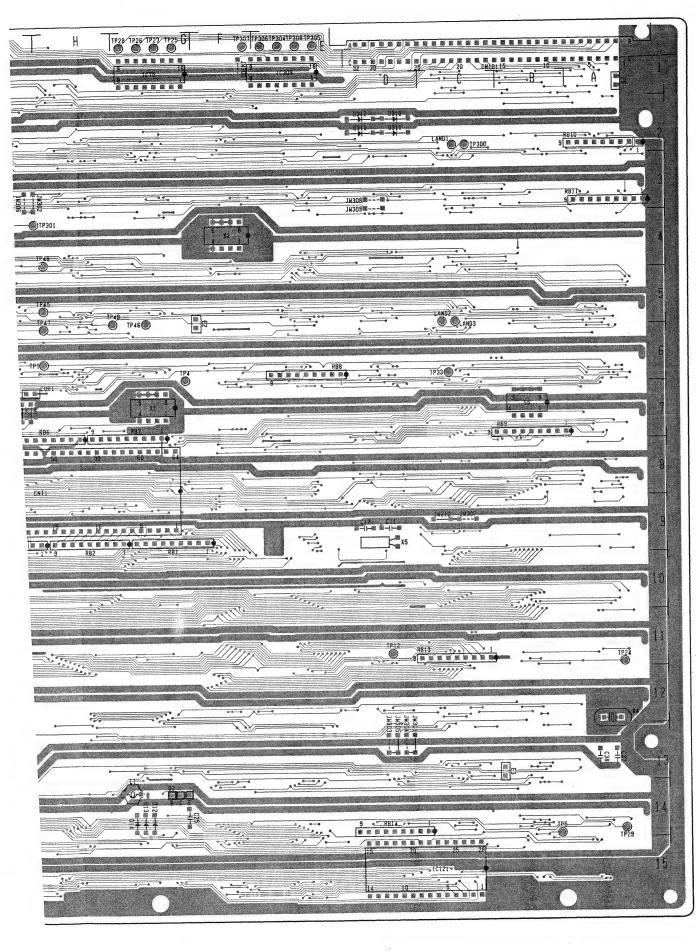
1-647-048-11 A SIDE



SY-184-A SIDE-1-647-048-11 BVE-2000



SY-184-B1-647-048-11
BVE-2000

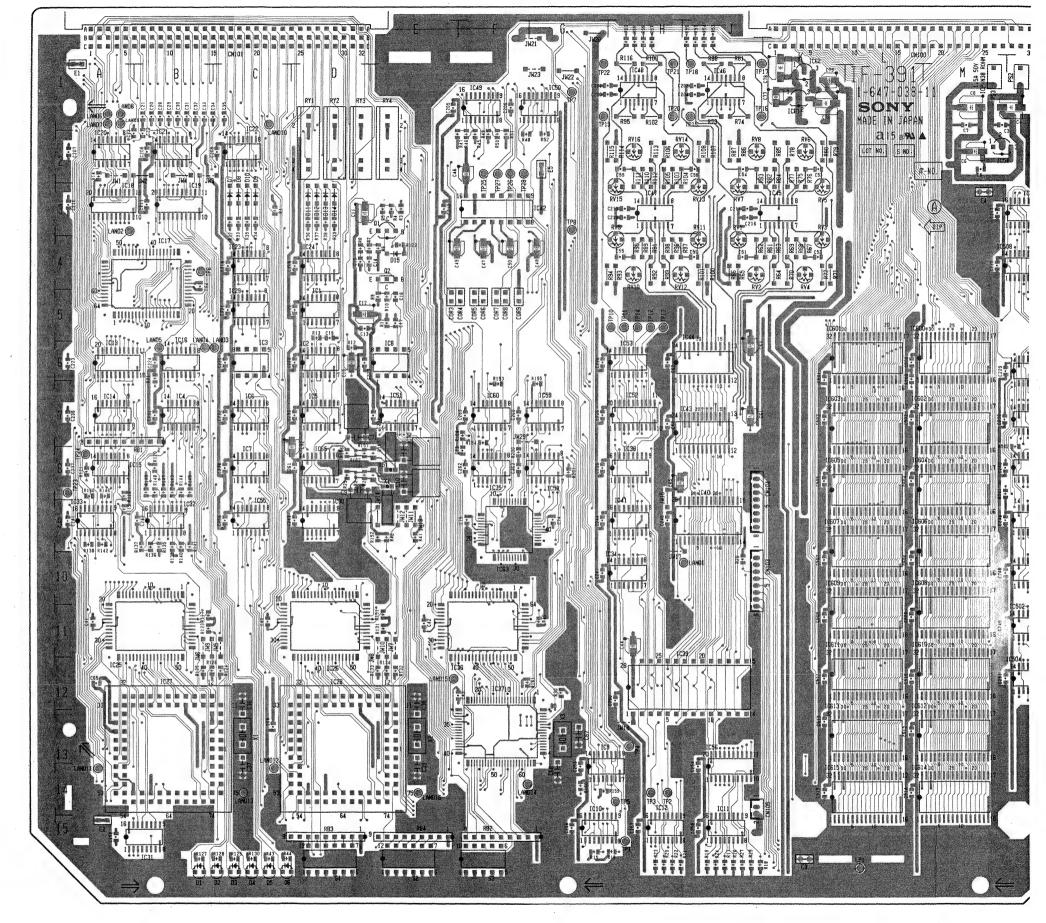


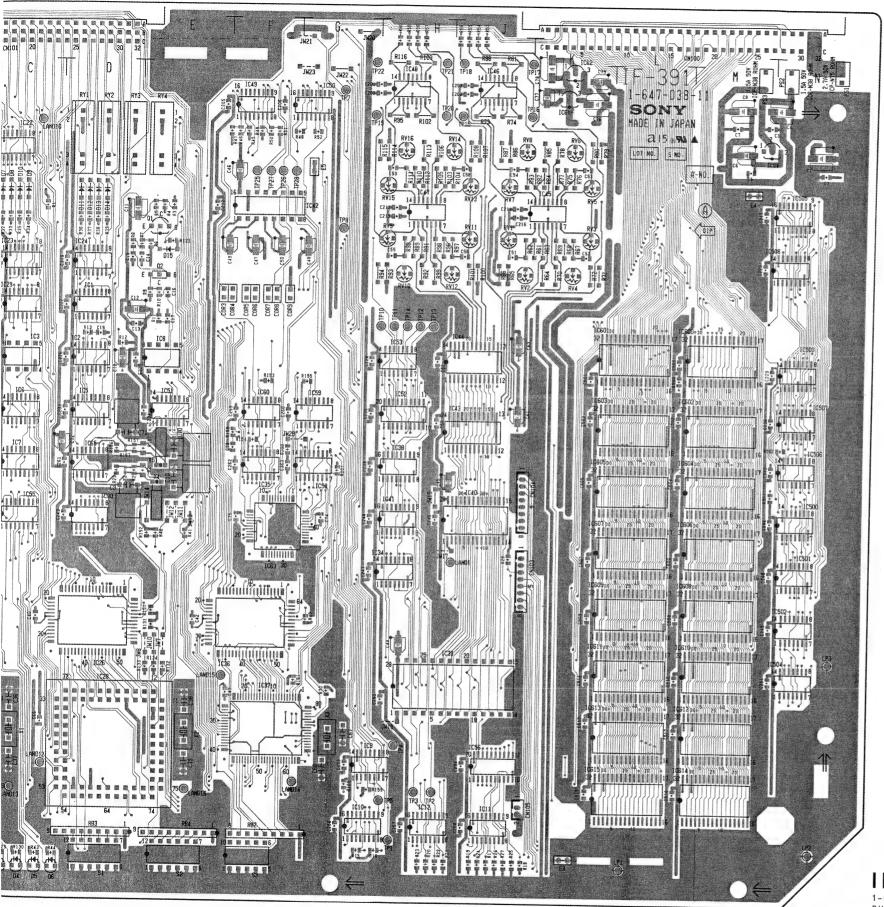
TP54 L-15 JW 314 J-7 BT1 M - 13IC27 IC97 H - 1 IC99 B-13 **TP55** L-14 IC28 G-10 PS1 TP56 K – 15 F ~ 2 IC100 B-13 N - 1 CNI1 G - 9 1C29 TP57 K-14 H - 3 A - 12CN19 J-10 IC30 IC101 TP58 K-15 CNI10 J-12 IC31 G - 5 IC102 A – 14 Q3 G - 14H-10 IC103 H-13 TP59 K-14 CNI121 C-14 1C32 TP60 K-15 IC104 C-14 G - 9 H - 4 IC33 CN1204 J-13 K-14 TP61 IC105 G-12 RB2 H - 9CN1205 J-13 1 C 3 4 N - 10TP62 K-15 IC35 H - 6IC106 H-12 RB3 J - 9 IC107 G-11 RB4 K – 9 TP63 J - 14CN100 L-1 IC36 G-4RB5 K – 7 TP64 J-15 IC108 H-11 C - 1 H - 5 CN101 1C37 TP65 J-14 H-7IC109 C-12 RB6 IC38 N - 11J-14 TP66 COR1 H-7IC39 E - 6 IC110 F-14 RB7 G - 7J-15 IC111 C-11 RB8 E - 6 **TP67** IC40 E-10 F-10 IC112 E-14 RB9 B - 7 TP300 C - 2 N - 14IC41 D 1 TP301 IC113 F-12 A – 2 H – 4 **RB10** D 2 N - 141 C 4 2 E-6TP302 A - 3 K – 4 N - 141 C 4 3 A – 8 IC114 F-11 **RB11** D 3 N - 15 IC44 F - 8 IC115 E-12 RB12 K – 15 TP303 K - 4 D 4 RB13 C-11 TP304 E – 1 IC 116 E-11 B - 4 D12 G-14 IC 45 TP305 IC117 C-13 **RB14** D-14 E-1 D13 G-14 IC 46 C - 8 TP306 E ~ 1 G-14 IC47 E - 8 IC118 F-15 D14 C - 9 IC119 E-15 S 2 L-15 TP307 F - 1 D310 D - 2 IC48 IC120 D-14 TP308 E ~ 1 B-10 S 4 K-15 D311 IC 49 D-2S 5 C - 14B - 7 IC 121 D312 D - 2 IC50 B = 9G-7 X 1 D313 D - 2 IC51 B - 6 IC122 D - 12S 6 M - 15F - 4 X 2 IC123 A-15 IC52 IC124 J-15 X 4 A-12 N - 1 A - 3 E 1 1C53 D - 9 IC125 G-13 TP3 N-2X 5 E 2 F-5 1C54 C - 3TP4 G-6E 3 B-13 IC55 C - 7 IC126 B-15 E 4 L-15 IC56 C - 6IC127 G-15 TP5 B-14 IC128 TP9 N - 11D - 6 C - 4 IC58 E 5 A - 1TP12 IC129 C - 2 D-11 D-9IC59 TP24 A-11 1 C 1 K – 6 IC 60 A-210200 N-7IC61 10201 L-7 **TP25** G-11 C 2 N-4IC202 TP26 G-1 IC3 IC 62 A – 7 L - 4 10203 L - 8 TP27 G - 1 C-5IC 63 IC4 L - 4 TP28 G-11 C 5 L-5 IC64 D-6IC302 G - 3I C 9 J-10 IC65 B - 3IC304 N-3TP29 A - 14IC308 TP30 J - 14J - 12IC66 B-11 1010 **TP31** IC309 E-1 J-15 E - 4 IC13 K – 3 1C67 IC311 TP32 J - 15E - 3IC14 G-6 IC68 A - 6 IC69 A - 9 IC312 F - 3 TP33 C - 6 IC15 M - 111C313 E-5 TP42 N-1IC70 D - 5 IC 16 M - 101C314 J-7 TP43 N - 1IC71 D - 4 IC17 M-2TP45 K – 7 H - 5 IC18 L - 3 1C72 H-15 IC315 1 C 7 3 A - 10 TP46 G - 5 IC19 L - 2 IC75 G - 1 JW301 TP47 1C20 K - 2 TP48 JW302 H - 3H-4IC77 L-15 1 C 2 1 J-2TP49 G - 5 JW305 D - 13 IC22 J - 1 IC78 F - 6 TP50 IC23 M - 3IC83 A - 11JW310 C-9 L-14 B-12 JW311 M - 15TP51 L-14 1C89 1C24 N - 13TP52 JW312 H-7 L-15 IC92 F - 6 1025 N - 12TP53 L-14 F - 5 JW313 J - 7 IC26 H-7IC93

SY-184(1-647-048-11)

SY-184-B SIDE-1-647-048-11 BVE-2000

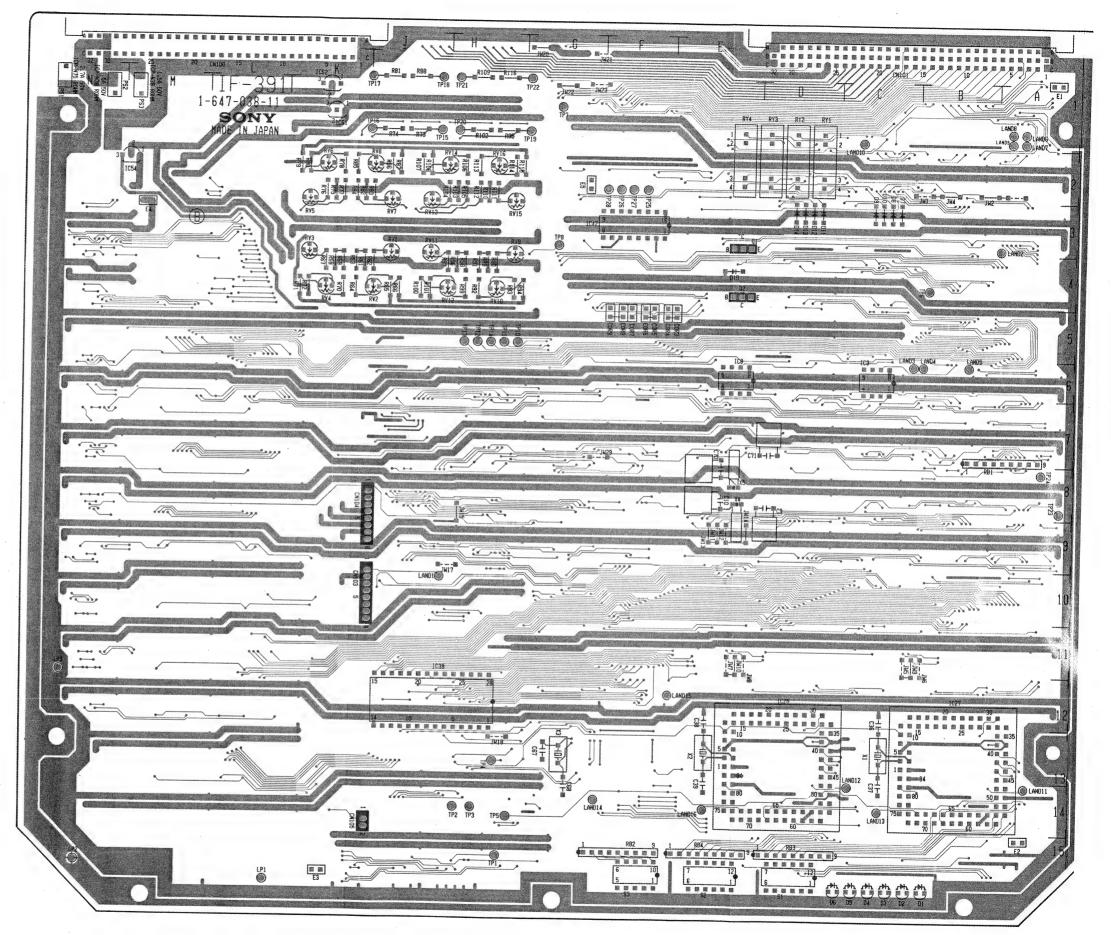
				•		
IF-391(1 - 6 4 7 - 0 3	8 - 11)				
C N 1 2 7	B – 12	I C 1 0	G – 14	JW2	B – 2	TP2
CN128	D - 12	IC11	J – 14	JW 4	B – 2	TP3
CN139	J – 12	IC12	H – 14	JW9	B – 11	T P 4
		IC13	A – 6	JW 10	E-11	TP5
CN100	L - 1	IC14	A – 7	J.W 13	E – 9	TP6
CN101	C - 1	IC15	A – 8	JW 14	E – 8	T P 7
CN103	K – 10	IC16	B - 5	JW 15	H – 8	T P 8
CN104	K – 8	IC17	B – 4	JW 20	G – 1	TP10
CN105	K – 14	IC18	A - 3	JW 22	G – 1	TP11
		IC19	B – 3			TP12
COP3	E – 5	IC20	A - 2	LP1	L - 15	TP13
COP5	F - 5	IC21	B - 2	L P 2	N – 15	TP14
COP7	F - 5	IC22	C – 2	LP3	N - 12	TP15
COP9	F - 5	IC23	C – 4			TP16
		IC24	D – 4	PS1	N – 1	TP17
COR3	E - 5	1 C 2 5	A – 12	PS2	N – 1	TP18
COR4	E - 5	1 C 2 6	D-12	PS3	M – 1	TP19
COR5	F - 5	1 C 2 7	B - 12			TP20
COR6	F - 5	IC28	D - 12	Q 1	E - 3	TP21
COR7	F – 5	IC29	C – 5	Q 2	E – 4	TP22
COR8	F – 5	IC30	D - 9			TP23
COR9	F – 5	IC31	B – 15	RB1	B – 8	TP24
		IC32	B - 9	RB2	F – 15	TP25
D 1	B – 15	IC33	A – 9	RB3	D-15	TP26
D 2	C-15.	IC34	H-10	RB4	E-15	TP27
D 3	C-15	IC35	F – 8			TP28
D 4	C-15	IC36	F-12	RV1	J - 3	
D 5	C - 15	1 C 3 7	F-12	RV2	J – 5	X 1
D 6	C-15	IC38	H – 8	RV3	K – 3	X 2
D 7	C - 2	IC39	J – 12	RV4	K – 5	X 3
D 8	C – 2	IC40	J – 8	RV5	K – 3	X 4
D 9	C - 2	IC41	H 9	RV6	K – 2	X 5
D 1 0	C - 2	IC42	G – 3	RV7	J – 3	
D11	D - 3	IC43	J - 7	RV8	J – 2	
D 1 2	D - 3	IC44	J - 6	RV9	H-3	
D13	D-3	IC 45	K – 3	R V 10	H – 5	
D14	D. – 3	IC46	J – 1	RV11	J – 3	
D15	E – 4	IC47	H – 3	R V 12	H – 5	
		IC48	H – 1	R V 13	J - 3	
E 1	A – 1	IC49	F-1	R V 1 4	H - 2	
E 2	A - 15	IC50	G – 1	R V 15	H - 3	
E 3	K-15	IC51	E – 7	R V 16	H – 2	
E 4	M – 3	I C 5 2	H – 7			
E 5	G – 2	IC53	H – 6	RY1	D - 1	
		IC54	M – 2	RY2	D - 1	
1 C 2	D - 6	IC55	C - 9	RY3	D-1	•
1 C 3	C - 6	IC56	J – 13	RY4	E – 1	
I C 4	B – 7	I C 5 8	G – 8			
1 C 5	D - 7	I C 5 9	G - 7	S 1	D – 15	
I C 6	C - 7	IC60	F – 7	S 2	E-15	
1 C 7	C – 8	I C 6 1	K – 1	S 3	F-15	
I C 8	E - 6	I C 6 2	K – 1			
I C 9	H-13	I C 6 5	D - 8	TP1	H – 15	

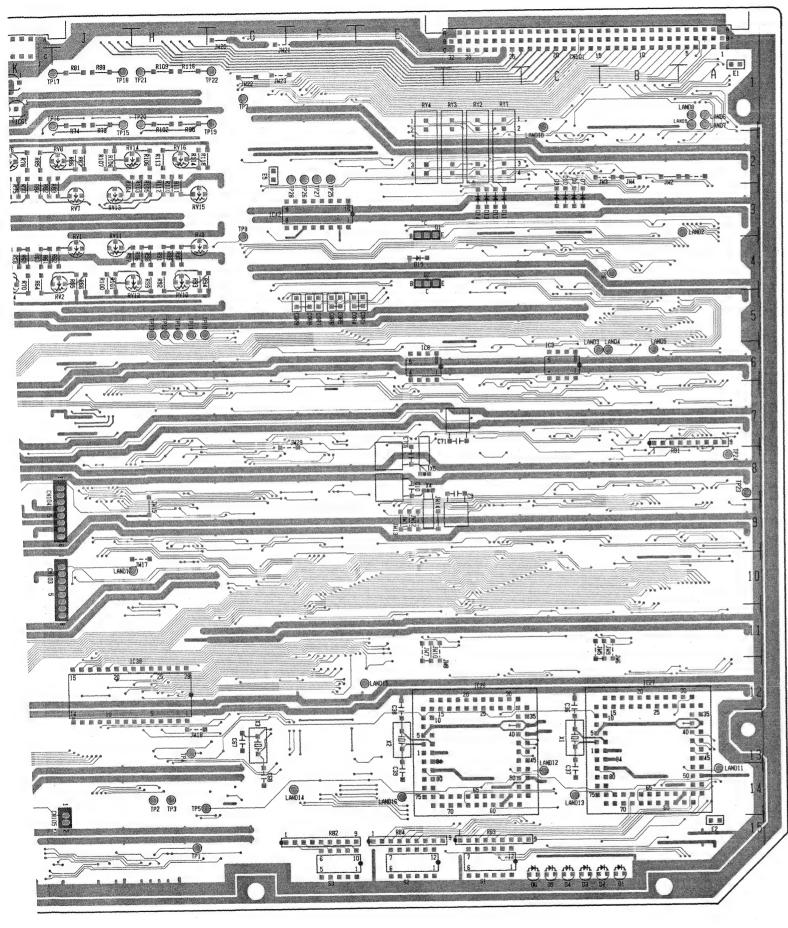




IF-391-A SIDE-

IF-391;Interface





IF-391(1-647-038-11) TP2 H-14 IC10 G-14 JW2 B – 2 CN127 B-12 H-14 JW4 B - 2 TP3 IC11 J-14 D - 12CN128 JW9 B-11 TP4 H-13 1 C 1 2 H-14 CN139 J-12 TP5 H-14 JW 10 E-11 IC13 A – 6 TP6 B-4JW 13 IC14 CN100 JW14 TP7 G – 1 IC15 A - 8 C - 1 CN101 TP8 JW 15 H – 8 CN103 K-10 IC16 B - 5 TP10 H-5IC17 JW 20 G - 1 CN104 K – 8 TP11 JW 22 G-1 H - 5CN105 IC18 A - 3 K-14 TP12 IC19 B - 3 L-15 TP13 H - 5 LP1 COP3 IC20 A - 2 TP14 B - 2 LP2 N - 15H - 5COP5 F - 5 IC21 C-2 LP3 N - 12 TP15 J - 1 F - 5 1 C 2 2 COP7 TP16 COP9 F-5 IC23 C - 4 TP17 J - 1 PS1 N - 1 IC24 D - 4 TP18 COR3 F - 5 IC25 A-12 PS2 N-1.1 - 1 TP19 D-12 PS3 IC 26 COR4 E - 5 TP20 H-1 COR5 F - 5 1C27 B-12 F - 3 TP21 H _ 1 IC28 D-12 Q 1 COR6 F - 5 Q2 TP22 G – 1 C-5 F - 5 IC29 COR7 TP23 1 C 3 0 D - 9COR8 F – 5 TP24 A - 8 R _ 8 RB1 IC31 B - 15COR9 TP25 F - 3 IC32 B - 9 RB2 F-15 D-15 TP26 F - 3 RB3 B-15 A - 9 D 1 IC33 TP27 F - 3 RB4 E-15 H - 10D 2 C-15 IC34 F - 3 TP28 C-15 IC35 F - 8 D 3 F-12 RV1 J - 3 C-15 IC36 D 4 J - 5 X 1 C-13 IC37 F-12 RV2 D 5 C-15 E-13 X 2 K – 3 BV3 D 6 C-15 IC38 H – 8 G-13 IC39 J-12 RV4 K – 5 Х3 C-2 D 7 RV5 K - 3 X 4 E – 8 1C40 J - 8 D 8 C-2RV6 K – 2 E - 8 IC41 H - 9D 9 C-2 C-2 1C42 G - 3 RV7 J - 3D10 1 C 4 3 RV8 J – 2 D 1 1 D-3J - 6 RV9 IC 4 4 D - 3D12 H - 5 BV10 K – 3 D 13 IC45 1C46 J - 1R V 11 J - 3D-3D 14 IC47 R V 12 E – 4 D 15 J - 3 R.V13 H-1 1C48 R V 14 H-2 E 1 Á – 1 IC49 F-1 A - 15 IC50 G-1 R V 15 H – 3 E 2 R V 16 H-2E-7 LC 5.1 E 3 K - 15E 4 M - 3IC52 H-7 RY1 D-1IC53 H-6G-2 E 5 IC54 M-2 RY2 D - 1 C-9 RY3 IC55 I C 2 D-6RY4 E-1 1 C 3 C - 6 IC56 J - 1.3IC4 B-7IC58 G -8 S 1 D-15 IC 5 9 G-7 IC 5 D-7E-15 F - 7 IC60 S 2 1 C 6 C - 7 F-15 K - 1 C - 8 IC61 S 3 I C 7 K-1 IC62 E - 6 I C 8 TP1 H-15 D-8H - 13IC65 1 C 9

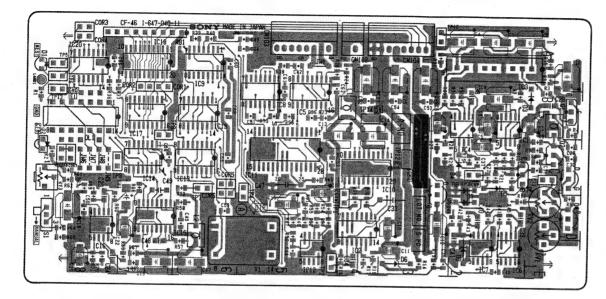
IF - 3 9 1 -B SIDE-

BVE-2000

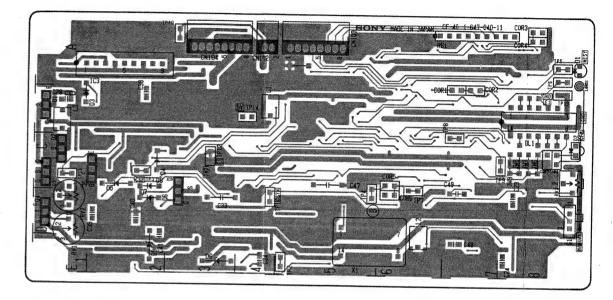
CF-46(1-647-040-11)

A - 4 A - 5 A - 3	J W 1 J W 6 J W 8	A - 5 C - 8 C - 8
A - 7 A - 8 D - 6 C - 8	Q1 Q2 Q3 Q4	B-1 C-1 C-1 D-1 C-1
B – 6 A – 7	Q6	D-3
A – 8 A – 8	RB1	A – 6
C - 6 D - 6 C - 8	R V 1 R V 2 R V 3	E – 1 D – 1 C – 8
C – 8	S 1	E - 8
A - 8 B - 8 B - 2 C - 2 C - 2 E - 3 D - 2 E - 2 C - 2	TP1 TP2 TP3 TP4 TP5 TP6 TP7 TP8 TP9	D-5 E-5 C-2 D-5 A-8 D-6 B-7 C-8
C - 2 E - 4 A - 2 C - 2 B - 5 E - 2 E - 2 B - 5 C - 3 C - 5 E - 6 C - 7 C - 7 C - 7	TP11 TP12 TP13 TP14 X 1	C-1 C-3 B-8 B-4 E-5
	A A A A A C D C C C A B B C C E D E C C E A C B E E B A C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C C E C E C C E C	A-5 JW6 A-3 JW8 A-7 Q1 A-8 Q2 D-6 Q3 C-8 Q4 Q5 B-6 Q6 A-7 A-8 RB1 A-8 C-6 RV2 C-8 RV3 C-8 C-8 TP1 TP2 B-8 TP3 B-2 TP4 C-2 TP5 C-2 TP6 E-3 TP7 D-2 TP8 E-2 TP9 C-2 TP10 TP11 C-2 TP10 TP10 TP11 C-2 TP10 TP11 TP10 TP10 TP10 TP10 TP10 TP10

For J,UC CF-46;NTSC Color Framing Detector



CF-46-A SIDE-



CF-46-B SIDE-

IC15

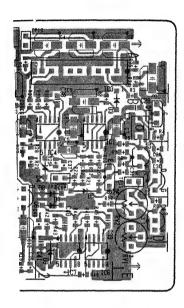
IC17 IC18

IC19 IC20

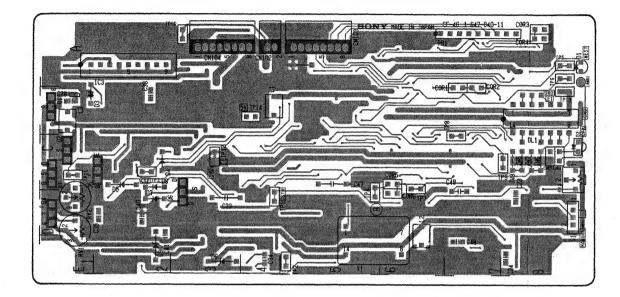
D - 6

B - 7 A – 7

B – 6 A – 8

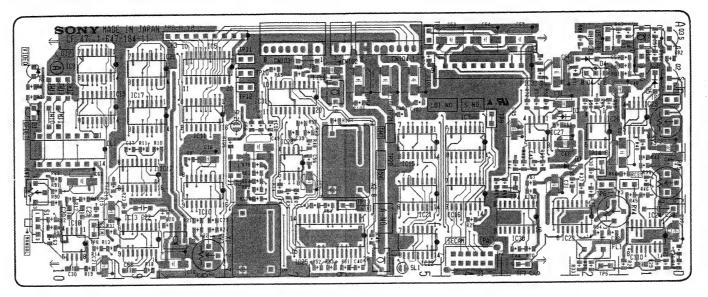


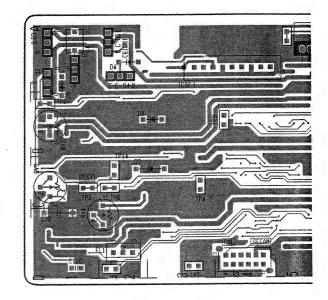
-46 -A SIDE-



CF-46-B SIDE-

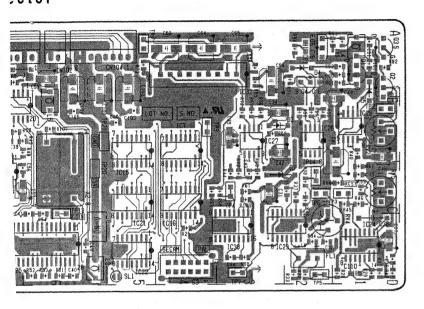
For EK CF-47; PAL Color Framing Detector



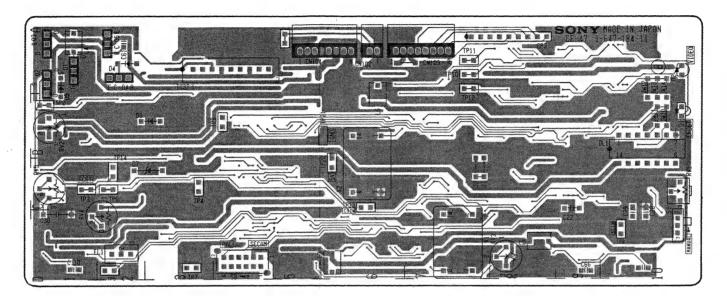


CF-47-A SIDE-

ector



CF-47-A SIDE-



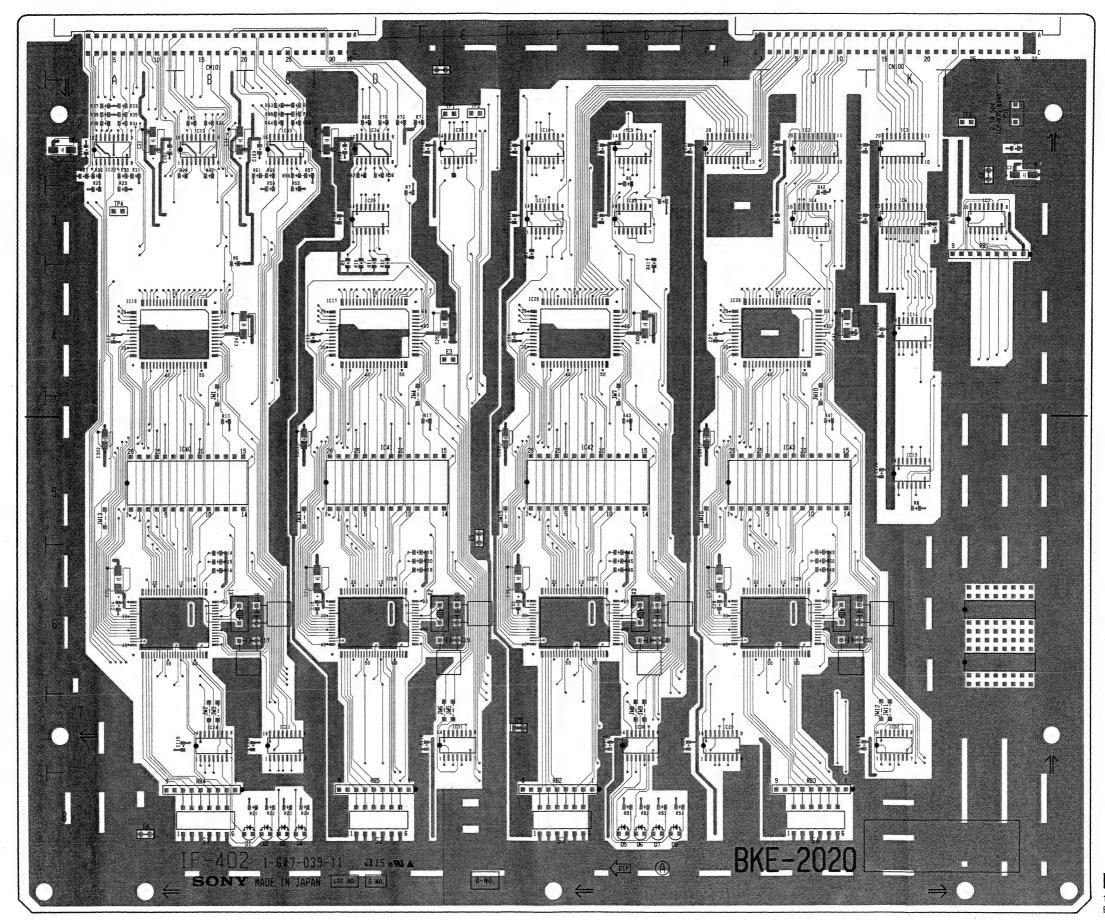
CF-47-B SIDE-

			*
CN102 CN103 CN104	A - 6 A - 7 A - 5	Q 2 Q 3 Q 4 Q 5	A - 1 A - 1 A - 2 A - 2
CP3	A – 8 B – 10	RV1 RV2 RV3	C - 1 0 B - 1 D - 8
D 1 D 2 D 3 D 4	B – 1 0 A – 1 0 B – 2 A – 2	RV4 RV5	D - 1 C - 1 D - 10
D 5 D 7 F L 1	B - 1 C - 2 D - 2	S 3 TP 1 TP 2	D - 4 A - 5 B - 1
IC 5 IC 7 IC 8 IC 1 0 IC 1 1 IC 1 2 IC 1 3 IC 1 5 IC 1 6 IC 1 7 IC 1 8 IC 1 9 IC 2 0 IC 2 1 IC 2 2 IC 2 3 IC 2 4 IC 2 5 IC 2 6 IC 2 7 IC 2 8 IC 2 9 IC 3 0 IC 3 1 IC 3 2	A - 8 B - 4 A - 1 0 D - 8 P - 8 C - 8 D - 9 C - 5 D - 4 B - 9 D - 5 D - 5 D - 5 D - 7 B - 2 D - 7 B - 3 B - 7 B - 1 D - 3 B - 7 A - 3	TP3 TP4 TP5 TP6 TP7 TP8 TP9 TP10 TP11 TP12 TP13 TP14 TP20 TP21 X1 X2	C - 1 C - 3 D - 2 C - 2 D - 3 D - 1 B - 4 A - 7 B - 7 C - 6 B - 6 D - 7 C - 6
JW 10 JW 12	B – 1 0 A – 1 0		
J 1 J 2 J 3	C - 7 C - 7 A - 6		
Q1	A – 1		

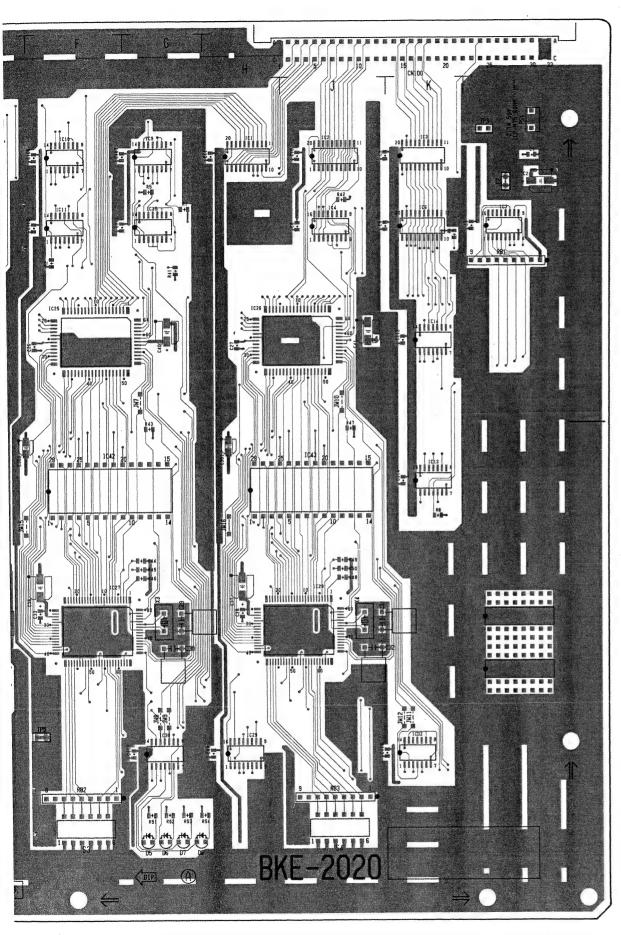
CF-47(1-647-184-11)

IF-402;9 PIN Interface

IF-402(1 - 6 4 7 - 0 3	9-11)	
C N I 4 0 C N I 4 1 C N I 4 2 C N I 4 3	B - 5 D - 5 F - 5 J - 5	IC 4 1 IC 4 2 IC 4 3	D - F - J - B -
CN100 CN101	K – 1 B – 1	JW 4 JW 7 JW 10	D - G - J -
D 1 D 2 D 3	C - 8 C - 8 C - 8	P S 1	L-
D 4 D 5 D 6 D 7 D 8	C - 8 G - 8 G - 8 G - 8 G - 8	RB1 RB2 RB3 RB4 RB5	L - F - J - B - D -
E 1 E 2 E 3 E 4 E 5	E - 1 L - 2 E - 4 A - 8 E - 5	S 1 S 2 S 3 S 4	B - D - F - J -
I C 1 I C 2 I C 3 I C 4 I C 6	H - 2 J - 2 K - 2 J - 3 K - 3	TP1 TP2 TP3 TP4 TP5	E - L - A - F -
IC 7 IC 9 IC 10 IC 11 IC 13 IC 14 IC 16 IC 17 IC 18 IC 19 IC 20 IC 21 IC 22 IC 23 IC 24 IC 25 IC 25 IC 26 IC 27 IC 28 IC 29 IC 30 IC 31 IC 32 IC 33 IC 34 IC 35 IC 36 IC 40	L - 3 - 2 - 2 - 2 - 3 - 5 - 4 - 4 - 6 - 6 - 3 - 7 - 2 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7	X 1 X 2 X 3 X 4	B - G - J -

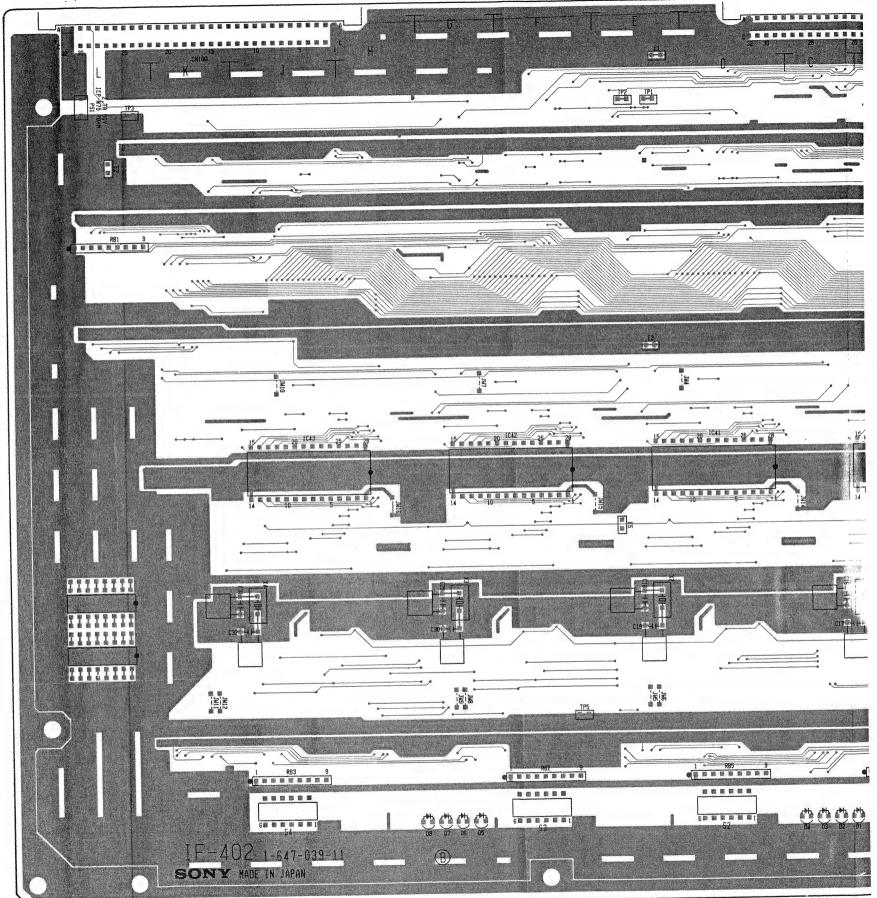


1F-402-A SIDE 1-647-039-11 BKE-2020



IF-402-A SIDE-

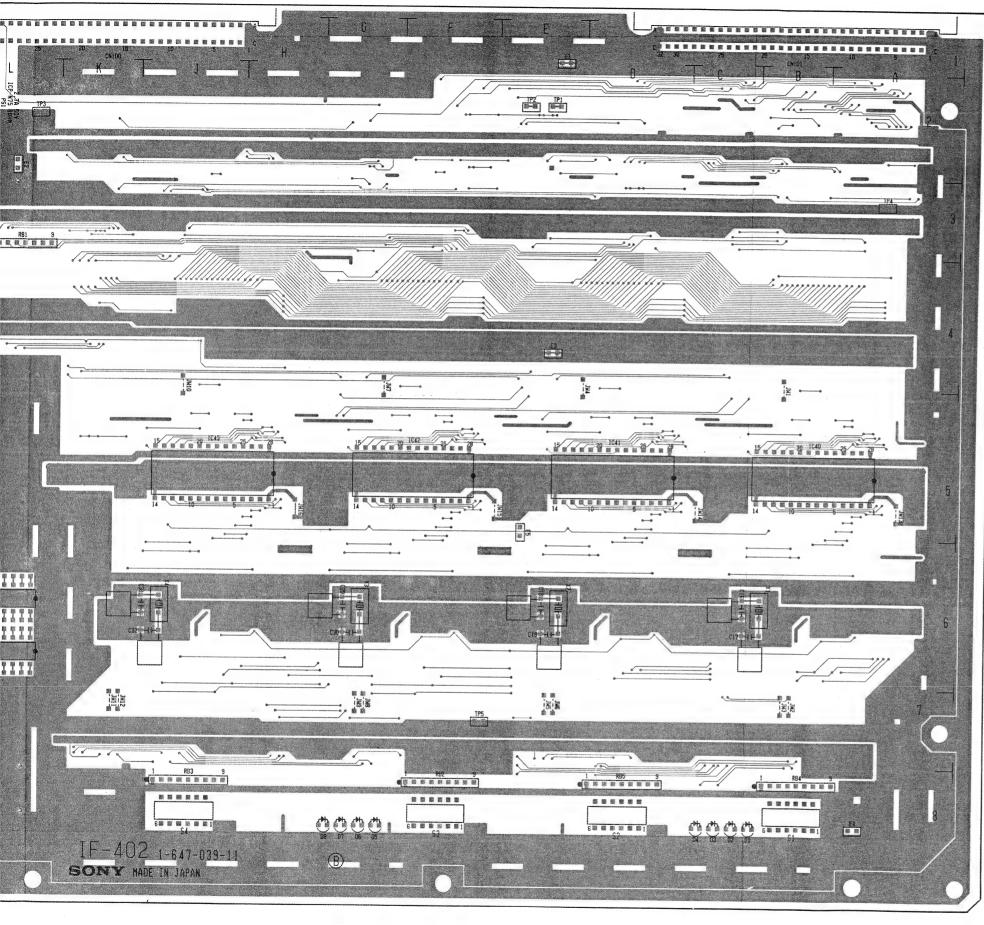
IF-402;9 PIN Interface



02 IF-402 (BKE-2020)

IF-402(1-647-039-11)

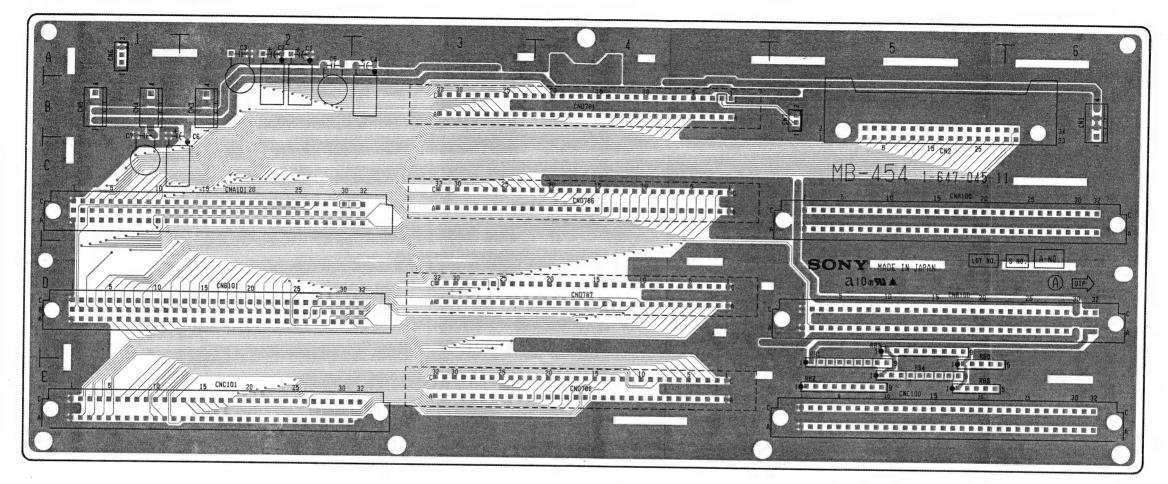
PIN Interface



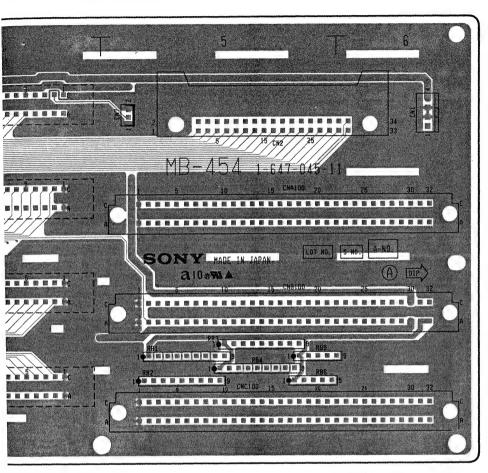
IF-402-B SIDE-

C N I 4 0 C N I 4 1 C N I 4 2 C N I 4 3	B – 5 D – 5 F – 5 J – 5	I C 4 1 I C 4 2 I C 4 3	D – 5 F – 5 J – 5
CN100 CN101	K – 1 B – 1	JW 1 JW 4 JW 7 JW 10	B – 4 D – 4 G – 4 J – 4
D 1 D 2 D 3 D 4	C - 8 C - 8 C - 8 C - 8	PS1	L – 2
D 5 D 6 D 7 D 8	G – 8 G – 8 G – 8 G – 8	RB2 RB3 RB4 RB5	L – 3 F – 8 J – 8 B – 7 D – 7
E 1 E 2 E 3 E 4 E 5	E - 1 L - 2 E - 4 A - 8 E - 5	S 1 S 2 S 3 S 4	B - 8 D - 8 F - 8 J - 8
I C 1 I C 2 I C 3 I C 4 I C 6	H - 2 J - 2 K - 2 J - 3 K - 3	TP1 TP2 TP3 TP4 TP5	E - 2 E - 2 L - 2 A - 3 F - 7
IC 7 IC 9 IC 10 IC 11 IC 13 IC 14 IC 16 IC 17 IC 18 IC 19 IC 20 IC 21 IC 22 IC 23 IC 24 IC 25 IC 26 IC 27 IC 28 IC 29 IC 30 IC 31 IC 32	K-3 L-3 G-2 F-3 KK-4 D-6 B-6 B-7 F-4 H-6 B-7 F-7 K-7	X 1 X 2 X 3 X 4	B - 6 E - 6 G - 6 J - 6
IC33 IC34 IC35 IC36 IC40	C-2 D-2 G-3 E-2 B-5		

MB-454; Mother board



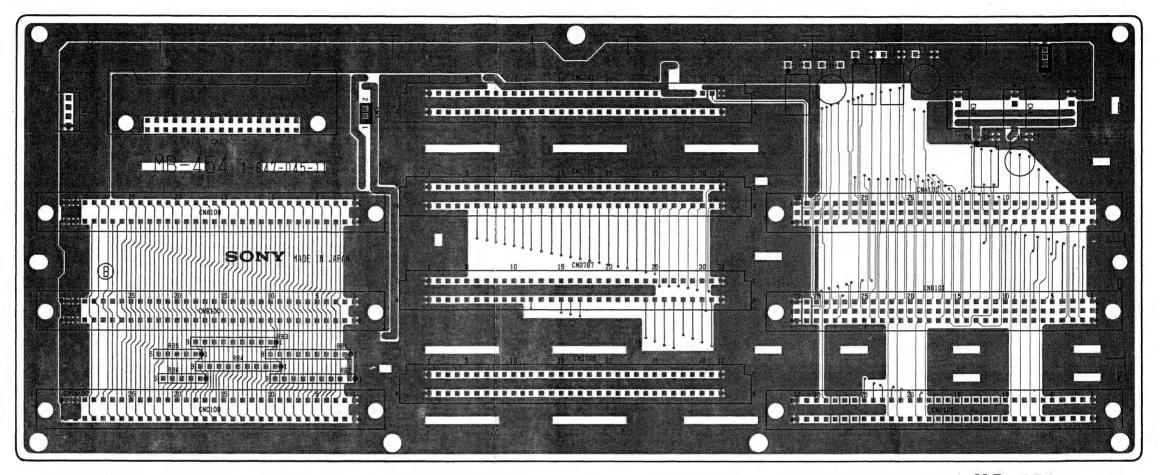
MB-454 - A SIDE-



MB-454 - A SIDE-

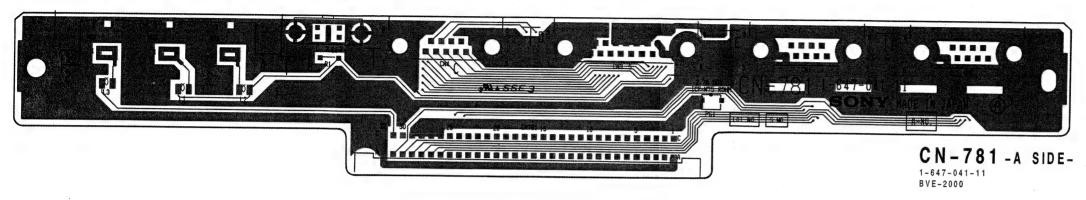
				n ••

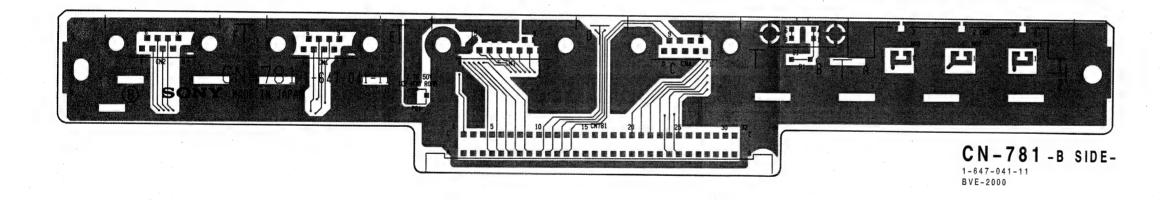
MB-454; Mother board



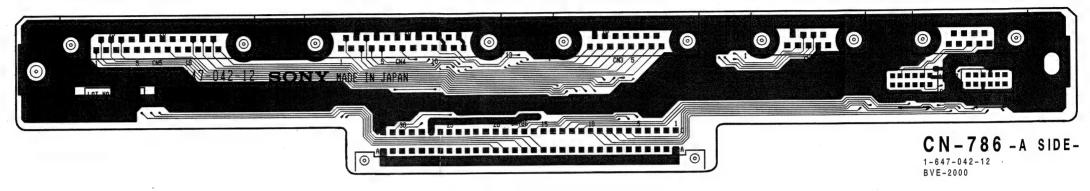
MB-454 -B SIDE-

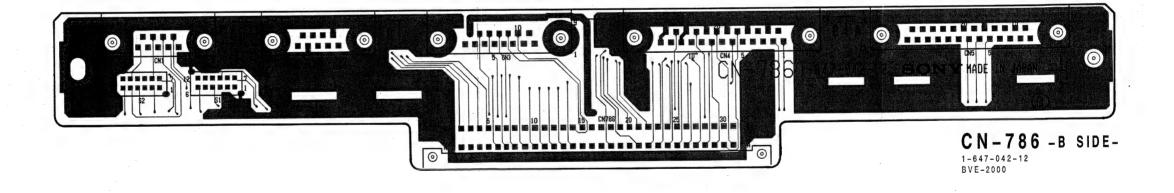
CN-781; Connector



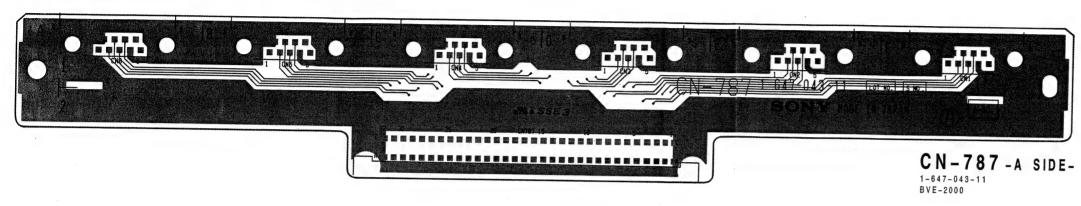


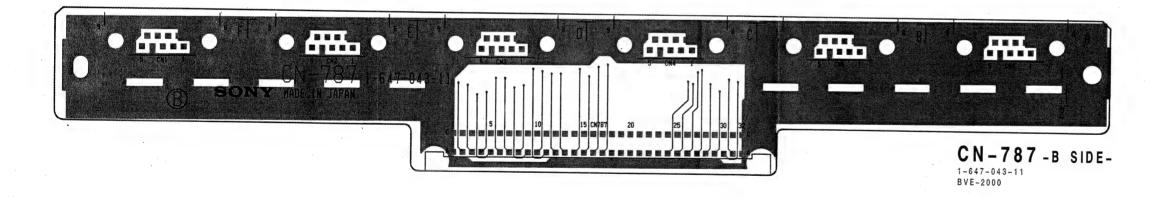
CN-786;Connector





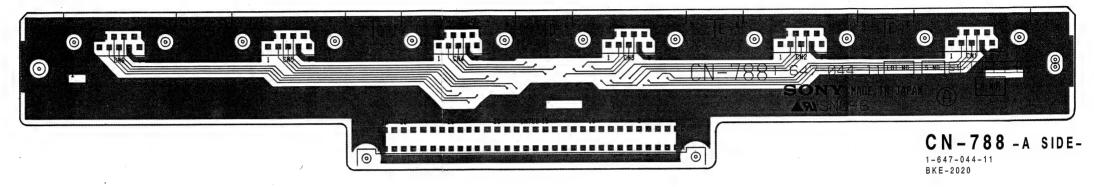
CN-787; Connector

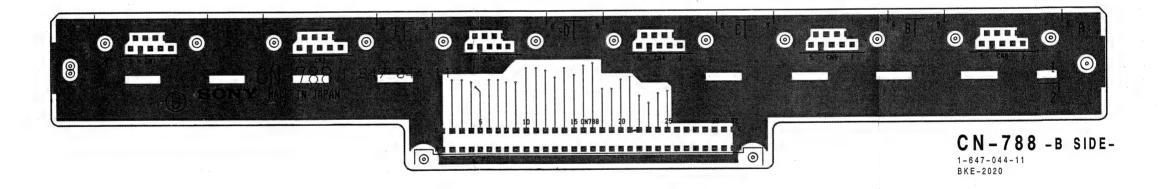




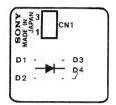
3 – 1 4

CN-788;Connector

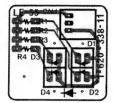




LE-55; Power Indicator

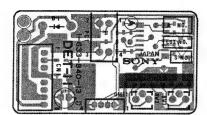


LE-55 - A SIDE-

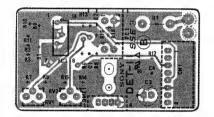


LE-55 -B SIDE-

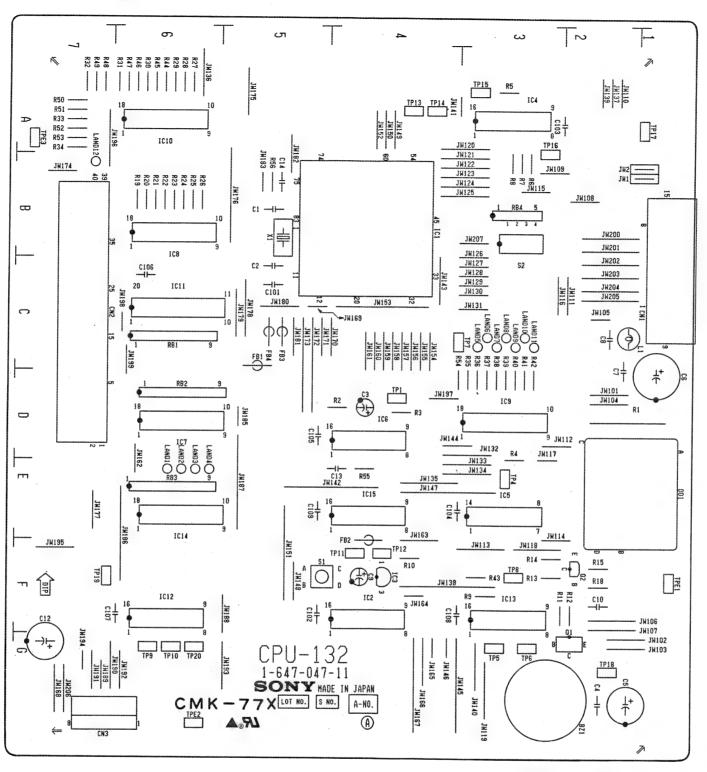
DET-11; Search Dial Detector CPU-132; Keyboard Controller



DET-11 -A SIDE-1-633-840-13 BKE-2010



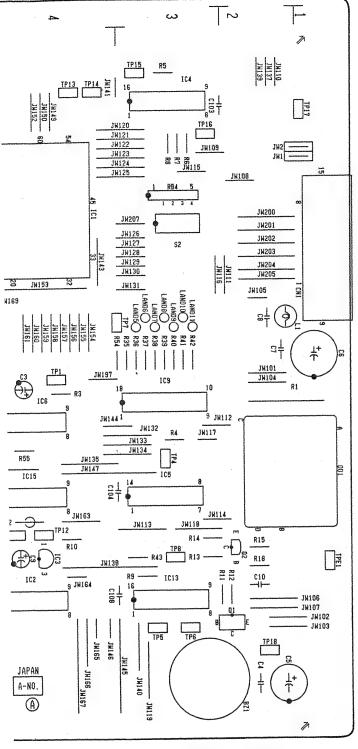
DET-11 -B SIDE-1-633-840-13 BKE-2010



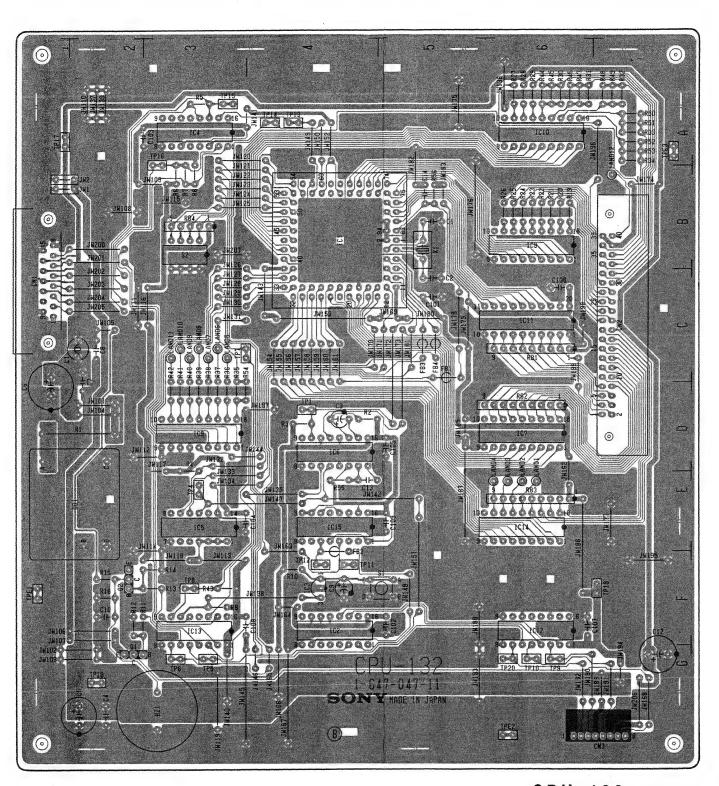
9999999 9999999 00000000 0000000 000000000 1-647 SONY (B)

CPU-132 -A SIDE-

CPU-132(1-647-047-11)



CPU-132-A SIDE-



CPU-132-B SIDE-1-647-047-11 BKE-2010

JW131 C-3

DD1	E – 1	JW 132	D – 3	JW 189	G - 7
		JW 133	E - 3	JW 190	G – 6
FB1	C – 5	JW134	E – 3	JW 191	G – 7
FB2	F – 4	JW 135	E – 4	JW 192	G – 6
FB3	C – 5	JW 136	A – 6	JW 193	G – 5
FB4	C – 5	JW 137	A – 2	JW 194	G – 7
		JW 138	F – 4	JW 195	F – 7
IC1	B – 4	JW 139	A – 2	JW 196	A – 7
I C 2	F – 4	JW 140	G – 3	JW 197	D – 4
1 C 3	F – 4	JW 141	A – 4	JW 198	C-6
I C 4	A – 3	JW 142	E – 4	JW 199	C - 6
I C 5	E – 3	JW 143	C – 4	JW 200	B - 2
1 C 6	D – 4	JW 144	D – 4	JW 201	B - 2
I C 7	D – 6	JW 145	G – 3	JW 202	C - 2
I C 8	B – 6	JW 146	G – 4	J W 2 0 3	C - 2
I C 9	D – 3	JW 147	E - 4	JW 204	C - 2
IC10	A – 6	JW 148	F – 5	JW 205	C - 2
IC11	C - 6	JW 149	A – 4	JW 206	G – 7
IC12	F-6	JW 150	A – 4	JW 207	B – 3
IC13	F-3	JW 151	F – 5 A – 4	0.4	F - 2
IC14	E-6	JW 152	C - 4	Q 1	F – 2
IC15	E – 4	JW 153	C – 4	Q 2	F-2
114/4	В 0	JW 154	C – 4	RB1	C – 6
JW1 JW2	B – 2 B – 2	JW 155 JW 156	C – 4	RB2	D - 6
JW 101	D - 2	JW 150	C – 4	RB3	E - 6
JW 101	G-1	JW 158	C – 4	RB4	B - 3
JW102	G – 1	JW 159	C – 4	1104	D - 0
JW 104	D-2	JW 160	C - 4	S 1	F – 5
JW 104	C-2	JW 161	C-4	S 2	C - 3
JW 106	F-1	JW 162	E - 6	0.2	
JW107	F – 1	JW 163	E – 4	TPE1	F – 1
JW 108	B – 2	JW 164	F – 4	TPE2	G - 6
JW109	B – 3	JW 165	G – 4	TPE3	A – 7
JW110	A – 2	JW 166	G – 4		
JW111	C-2	JW 167	G – 4	TP1	D – 4
JW112	D-2	JW 168	G - 7	TP4	E – 3
JW113	F-3	JW 169	C - 4	TP5	G - 3
JW114	E - 3	JW 170	C – 4	TP6	G – 3
JW115	B - 3	JW 171	C - 5	TP7	C - 3
JW116	C – 3	JW 172	C – 5	TP8	F - 3
JW117	D - 3	JW 173	C – 5	TP9	G – 6
JW118	F – 3	JW 174	B - 7	TP10	G - 6
JW119	G-3	JW 175	B-5 .	TP11	F – 4
JW 120	A – 3	JW 176	B – 5	TP12	F – 4
JW 121	B – 3	JW 177	E – 7	TP13	A – 4
JW 122	B3	JW 178	C – 5	TP14	A – 4
JW123	B – 3	JW 179	C – 5	TP15	A – 3
JW 124	B – 3	JW 180	C – 5	TP16	A – 3
JW 125	B – 3	JW 181	C – 5	TP17	A – 1
JW 126	B – 3	JW 182	B – 5	TP18	G – 2
JW127	C – 3	JW 183	B – 5	TP 19	F - 7
JW 128	C – 3	JW 185	D – 5	TP20	G – 6
JW 129	C – 3	JW 186	E - 6		
JW 130	C-3	JW 187	E - 5	X 1	B – 5
110/404	C 2	0.0 1 10/1	E E		

JW188

SECTION 4 SEMICONDUCTOR PIN ASSIGNMENTS

ここに記載されているIC, トランジスタ, ダイオードは、それぞれの機能を等価的に表したものです。したがって互換性を表すものではありません。(互換性のない型名が併記されている事もあります。) 部品の交換をする時は、SPARE PARTSの章を参照してください。

ICs, transistors and diodes of which functions are equivalent are described here. Therefore, incompatible device names may be described together. For parts replacement, refer to the Spare Parts section in this manual.

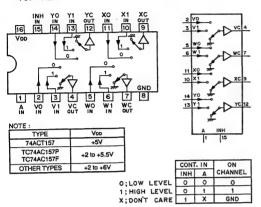
IC	PAGE	IC	PAGE	IC .	PAGE	TRASISTOR	PAGE
74AC157SJ4-2		SN74ALS00ANS 4-13		SN74LS06NS4-20		2SA1175 4-25	
, II (6, 6, 6, 6, 11)		SN74ALS04BNS 4-14		SN74LS123NS 4-20		2SC1815 4-25	
AM26LS31CNS4-2		SN74ALS08NS4-14		SN74LS221NS 4-20		2SC2785 4-25	
AM26LS32ACNS 4-2		SN74ALS10ANS 4-14		SN75207BNS 4-21		2SD774-34 4-25	
7 (11)202002. 10:10			NS 4-15			2SK523	
BX365AL 4-2		SN74ALS163	BNS 4-14	TC4049BP	4-11		
		SN74ALS32N	NS 4-15	TC74AC574F	4-20		
CX23028 4-2		SN74ALS541NS 4-15		TC74HC221AF4-21		DIODE	
CXD1095Q4-3		SN74HC00ANS4-15		TC74HC86AF4-21			
CXD1216M			NS 4-15	TL062CPS	4-21	10E-2	4-25
CXD1217M		SN74HC04A	NS 4-15	TL082CPS	4-21	1S1588	4-25
CXK5864BM-12L		SN74HC05A	NS 4-15	TL084CNS	4-21	1SS119	4-25
		SN74HC08A	NS 4-15	TMP68301F-	12 4-22	1SS168	4-25
DS1005-100	4-3	SN74HC10A	NS 4-16	TMS27C256	-20JL 4-21	1SS97	4-25
		SN74HC112A	ANS 4-16	TMS27C512	-15JL 4-23		
HD63265FP	4-6	SN74HC11A	NS 4-16			EBR5534S	4-25
HD641180XF6		SN74HC138A	NS 4-16	UPC393C	4-23	ERB81-004	4-25
HD64718XOCP6		SN74HC139A	NS 4-16	UPD71054G	B-		
HM628128LFP-10 4-10		SN74HC147N	NS 4-16	10-3B4	4-23	PY5504S	4-25
		SN74HC14A	NS 4-16	UPD71059G	B-		
LM1881N	4-9	SN74HC157A	ANS 4-2	10-3B4	4-24	RD??ESB?	4-25
		SN74HC161A	ANS 4-17	UPD71071G	C3B6 4-24		
M27C4002-12F1	4-10	SN74HC164A	ANS 4-17			TLG124A	
M54513P	4-9	SN74HC166A	ANS 4-17	X2816CP-20	4-21	TLG223	4-25
MAX232N	4-11	SN74HC175A	NS 4-18			TLO124	4-25
MB4002PF 4-11		SN74HC193A	AN 4-17			TLY123	4-25
MB8421-90LPFQ	4-11	SN74HC193A	NS 4-17				
MB86023	4-12	SN74HC20A	NS 4-18				
MB89322APFQ 4-12		SN74HC245A	NS 4-18			OTHERS	
MC14049UBF	4-11	SN74HC251A	NS 4-18				
MC14069UBF 4-11		SN74HC2661	VS 4-18			DM211A	4-25
MC14538BCP 4-13		SN74HC273A	NS 4-18				
MC34051P 4-13		SN74HC32A	NS 4-19			TLP801A	4-25
MC74HC147F	4-11	SN74HC367A	NS 4-19				
MC74HC540N4-13		SN74HC393A	NS 4-19				
	•	SN74HC4075	ANS 4-19				
NJM78L09A	4-13	SN74HC4078	BNS 4-19				
NJM79L05A		SN74HC540A	NS 4-13				
NJM79L09A4-13		SN74HC541A	NS 4-19				
		SN74HC573E	3NS 4-20				
PST529C	4-13	SN74HC574A	NS 4-20				
PST529H4-13		SN74HC74AI	V 4-20				
		SN74HC74AI	NS 4-20				
RF5C15	4-14	SN74HCT540	ANS 4-13				
		SN74HCU04	ANS 4-15				
SM6430C	4-13	SN74LS03NS	S 4-20				

IC

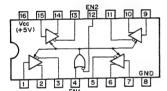
74AC157SJ (NS) FLAT PACKAGE SN74HC157ANS (TI) FLAT PACKAGE

C-MOS QUAD 2-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER - TOP VIEW -





AM26LS31CNS (TI) FLAT PACKAGE HIGH SPEED DIFFERENTIAL LINE DRIVER - TOP VIEW -

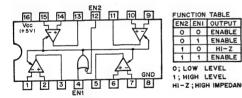


FUNCTION TABLE								
EN2	EN1	OUTPUT						
0	0	ENABLE						
0	1	ENABLE						
1	0	HI-Z						
. 1	1	ENABLE						

O; LOW LEVEL 1; HIGH LEVEL HI-Z; HIGH IMPEDANCE

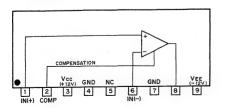
HI-Z

AM26LS32ACNS (TI) FLAT PACKAGE HIGH SPEED DIFFERENTIAL LINE RECEIVER - TOP VIEW -



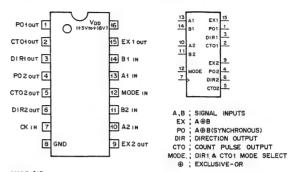
		SENSE	INPUT VOLT
ſ	LS32	±200mV	± 7V
1	LS33	±500mV	±15V

BX365AL (ROHM) VIDEO AMPLIFIER - SIDE VIEW -

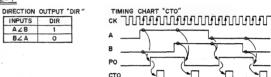


CX23028 (SONY)

C-MOS SYNCHRONOUS ROTATIONAL DIRECTION DETECTOR - TOP VIEW -



MODE = 1"

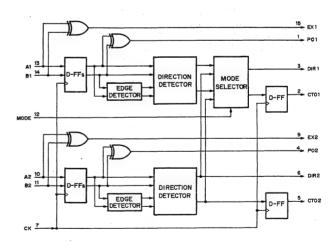


MODE = "0"

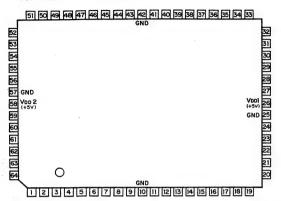
INF	PUTS	010.4	210.0			
CH1 CH2		DIR 1	DIR 2			
A1∠B1	A2∠B2	1				
B1∠A1	A2∠B2		THE SAME FUNCTION			
A1∠B1	B2∠A2	ALTERNATELY	OF MODE "1"			
B1∠A1	B2ZA2	0				

CTO 1; CTO 1 with MODE "0" = CTO 1 with MODE "1" + CTO 2 CTO 2; THE SAME FUNCTION OF MODE "1"

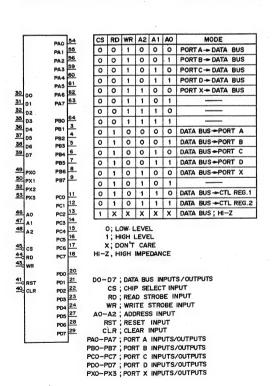
- 1 ; HIGH LEVEL 0 ; LOW LEVEL $A \angle B \text{ ; THE PHASE OF SIGNAL A IS IN ADVANCE FOR THE PHASE OF } B.$

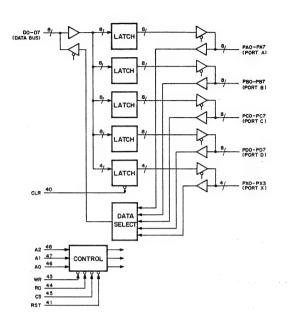


CXD1095Q (SONY) FLAT PACKAGE C-MOS I/O PORT EXPANDER - TOP VIEW -

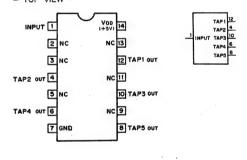


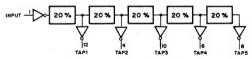
PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL
1			NC	17	0	0	PC6	33			NC	49	0	0	PXO
2			NC	18	0	0	PC7	34			NC	50	0	0	PX1
3	0	0	PB 1	19			NC	35	0	0	03	51			NC
4	0	0	PB 2	20	0	0	PDO	36	0	0	D4	52	0	0	PX2
5	0	0	PB3	21	0	0	PD1	37	0	0	D5	53	0	0	PX3
6	0	0	P84	22	0	0	PD2	38	0	0	D6	54	0	0	PAO
7	0	0	PB5	23	0	0	PD3	39	0	0	D7	55	0	0	PA1
8	0	0	PB6	24	0	0	PD4	40	0		CLR	56	0	0	PA2
9	0	0	PB7	25			GND	41	0		RST	57			GND
10			GND	26	0		VDD (+5V)	42			GND	58	0		VDD (+5V)
11	0	0	PCO	27	0	0	PD5	43	0		WR	59	0	0	PA3
12	0	0	PC1	28	0	0	PD6	44	0		RD	60	0	0	PA4
13	0	0	PC2	29	0	0	PD7	45	0		CS	61	0	0	PA5
14	0	0	PC3	30	0	0	DO	46	0		AO	62	0	0	PA6
15	0	0	PC4	31	0	0	Di	47	0		A1	63	0	0	PA7
16	0	0	PC5	32	0	0	02	48	0		A2	64	0	0	PBO





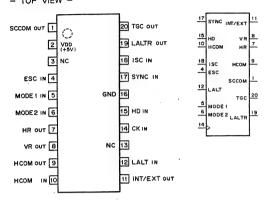
DS1005-100 (DALLAS SEMICONDUCTOR) (DELAY TIME = 100nS) C-MOS DELAY LINE - TOP VIEW -





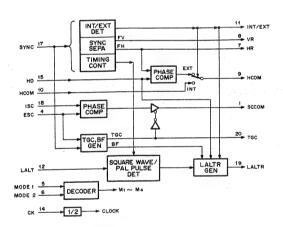
TYPE, NO.	T	DELAY TIME (ns)							
TTPE. NO.	TAP1	TAP2	TAP3	TAP4	TAP5				
DS1005-60	12	- 24	36	48	60				
DS1005-75	15	30	45	60	75				
DS1005-100	20	40	60	80	100				
DS1005-125	25	50	75	100	125				
DS1005-150	30	60	90	120	150				
DS1005-175	35	70	105	140	175				
DS1005-200	. 40	80	120	160	200				
DS1005-250	50	100	150	200	250				

CXD1216M (SONY) FLAT PACKAGE C-MOS GENLOCK DRIVER - TOP VIEW -



	PUT	MODE	SYSTEM
MODE1	MODE2	MODE	0.0.1
0	0	M1	PAL-VBS
1	0	M2	PALM-VBS
0	1	МЗ	PAL,SECAM-VS/SC/LALT
1	1	M4	NTSC-VBS,NTSC-VS/SC PALM-VS/SC/LALT

0 : LOW LEVEL 1 : HIGH LEVEL

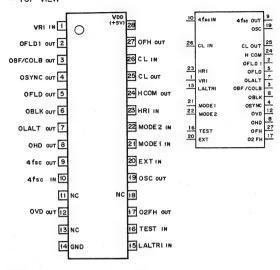


INPUT CK ESC HCOM HD ISC LALT MODE1,2 SYNC

: 4fso CLOCK INPUT : SC./COLOR BURST : PHASE COMPARATE FROM CXD1217 : H DRIVE FROM CXD1217 : SUBCARRIER FROM CXD1217 : LALT FROM REFERENCE SIGNAL GENERATOR : SYSTEM SELECT : SYNC FROM REFERENCE SIGNAL GENERATOR

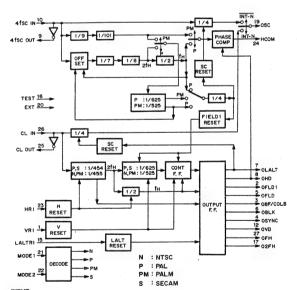
OUTPUT HCOM HR INT/EXT LALTR SCCOM TGC VR : PHASE COMPARATOR HR WITH HD
:fin OF SYNC SEPARATE
:INTERNAL/EXTERNAL SPECIFIED
:LINE CHANGE RESET
:PHASE COMPARATOR ESC WITH ISC
:TRISTATE CONTROL
:fv OF SYNC SEPARATE

CXD1217M (SONY) FLAT PACKAGE C-MOS SYNC GENERATOR - TOP VIEW



SYSTEM	4fsc	CLOCK
NTSC	910fн	910fн
PAL	1135fn+2fv	908fH
PALM	909fH	910fH
SECAM	_	908fH

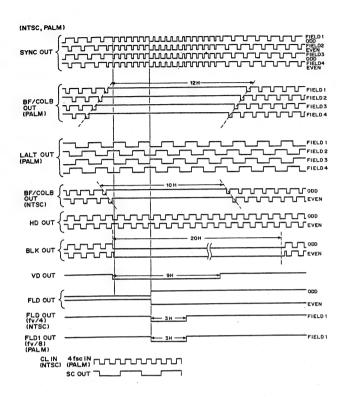
INF	TU	SYSTEM
MODE1	MODE2	STOTEM
0	0	NTSC
0	1	SECAM
1	0	PALM
1.	1	PAL
0 ; LOW 1 ; HIGH	LEVEL	

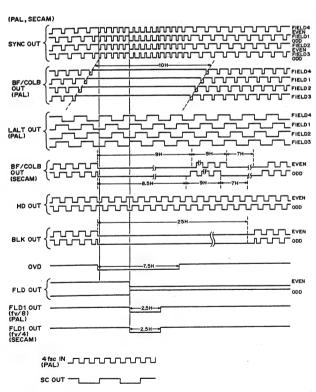


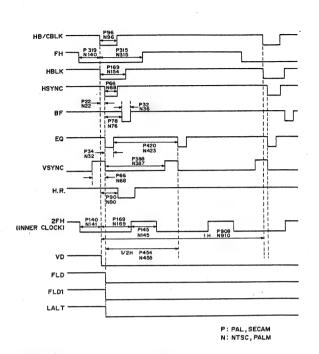
INPUT 4fSC IN CL IN EXT

HRI

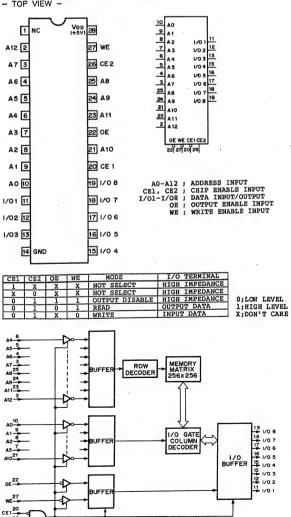
OUT PUT
4fSC OUT:
CL OUT:
HCOM
02fH
0BF/COLB:
OFH
0FLD
0FLD
0FLD
0HD
0LALT
0SC
0SYNC
0VD : 4fSC OUTPUT
; CLOCK OUTPUT
; CLOCK OUTPUT
; PHASE COMPARATOR
; 2fH OUTPUT
3: BURST FLAG/COLOR BLANKING
: COMPOSITE BLANKING
H FREQUENCE
; EVEN, ODD
; FIELD
I H DRIVE
; UINE CHANGE
; SUBCARRIER
; COMPOSITE SYNC
; V DRIVE



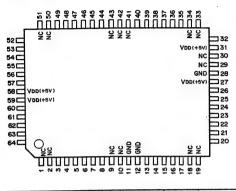




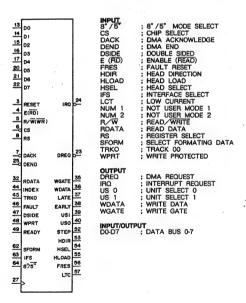
CXK5864BM-12L (SONY) FLAT PACKAGE C-MOS 64K (8192x8)-BIT STATIC RAM - TOP VIEW -

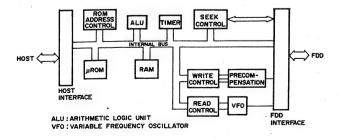


HD63265FP (HITACHI)
C-MOS FDC (FLOPPY DISK CONTROLLER)
- TOP VIEW -

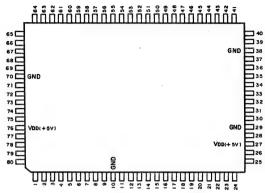


											$(V_{DD} = + 5V)$
PIN NO.	1/0	FUNCTION									
1	-	NC	17	1/0	D4	33	-	NC	49	1	READY
2	-	NC	18	-	NC	34	-	NC	50	-	NC
3	1	RESET	19	-	NC	35	0	WGATE	51	-	NC
4	Ť	E(RD)	20	1/0	D5	36	0	WDATA	52	- 1	STEP
5	T	R/W(WR)	21	1/0	D6	37	0	LATE	53		HDIR
6	1	CS	22	1/0	D7	38	0	EARLY	54	1	HSEL.
7	1	DACK	23	0	DREQ	39	0	US1	55	1	HLOAD
8		RS	24	0	IRQ	40	0	USO	56	1	FRES
9	-	NC	25	1	DEND	41	-	NC	57	1	LCT
10	-	NC	26	-	Voo	42	-	NC	58	-	Voo
11	-	GND	27	1	CK	43	-	NC	59	-	Voo
12	-	GND	28	-	GND	44	1	INDEX	60	1	NUM1
13	1/0	D0	29	-	NC	45	1	TRK0	61	1	NUM2
14	1/0	D1	30	-	NC	46	1	FAULT	62	1	SFORM
15	1/0	D2	31	-	Voo	47	1	DSIDE	63	1	IFS
16	1/0	D3	32	1	RDATA	48	1	WPRT	64	1	8"/5"





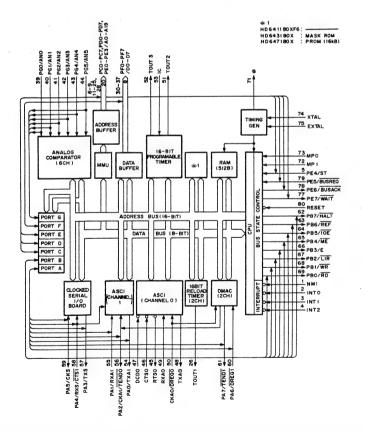
HD641180XF6 (HITACHI) C-MOS 8-BIT MICRO PROCESSING UNIT - TOP VIEW -



PIN		MODE 0		MODE 1		MODE 2	Р	PROM MODE		
No.	1/0	SIGNAL	1/0	SIGNAL	1/0	SIGNAL	1/0	SIGNAL		
1	1	NMI	1	NMI		NMI	0	A9		
2	1	INTO	-	INTO	-	INTO	-	NC		
3	1	INT1	- 1	INT1	1	INT1	-	NC		
4	1	INT2	1	INT2	1	INT2	-	NC		
5	1/0	PE4	0	ST	0	ST	-	NC		
6	1/0	PC0	0	A0	0	· A0	0	AO		
7	1/0	PC1	0	A1	0	A1	0	A1		
8	1/0	PC2	0	A2	0	A2	0	A2		
9	1/0	PC3	0	A3	0	A3	0	A3		
10	-	GND	-	GND	-	GND	-	GND		
11	1/0	PC4	0	A4	0	A4	0	A4		
12	1/0	PC5	0	A 5	0	A5	0	A5		
13	1/0	PC6	0	A6	0	A6	0	A6		
14	1/0	PC7	0	A7	0	A7	0	A7		
15	1/0	PD0	0	A8	1/0	A8/PD0	0	A8		
16	1/0	PD1	0	A 9	1/0	A9/PD1	-	NC		
17	1/0	PD2	0	A10	1/0	A10/PD2	0	A10		
18	1/0	PD3	0	- A11	1/0	A11/PD3	0	A11		
19	1/0	PD4	0	A12	1/0	A12/PD4	0	A12		
20	1/0	PD5	0	A13	1/0	A13/PD5	0	A13		
21	1/0	PD6	0	A14	1/0	A14/PD6	0	A14		
22	1/0	PD7	0	A15	1/0	A15/PD7	1	OE		
23	1/0	PEO	0	A16	1/0	A16/PE0	1	CE		
24	1/0	PE1	0	A17	1/0	A17/PE1	-	NC		
25	1/0	PE2	0	A18	1/0	A18/PE2	-	NC .		
26	0	TOUT1	0	TOUT1	0	TOUT1	-	NC		
27	-	VDD	-	VDD	-	VDD	-	VDD		
28	1/0	PE3	0	A19	1/0	A19/PE3	- 1	NC		
29	-	GND	-	GND	-	GND	- 1	GND		
30	1/0	PFO	1/0	D0	1/0	D0	0	00		
31	1/0	PF1	1/0	D1	1/0	D1	0	01		
32	1/0	PF2	1/0	D2	1/0	D2	0	02		
33	1/0	PF3	1/0	D3	1/0	D3	0	03		
34	1/0	PF4	1/0	D4	1/0	D4	0	04		
35	1/0	PF5	1/0	D5	1/0	D5	0	05		
36	1/0	PF6	1/0	D6	1/0	D6	0	06		
37	1/0	PF7	1/0	D7	1/0	D7	0	07		
38	-	GND	-	GND	-	GND	-	GND		
39	1	PG0/AN0	1	PG0/AN0	1	PGO/ANO	-	NC		
40	1	PG1/AN1	1	PG1/AN1		PG1/AN1	-	NC		

40 1	PG1/AN1	1	PG1/AN1		PG1/A	NI L	-	NC	
INPUT ANO — AN5 BUSREQ CTSO, 1 DCDO, 1 DREQO, 1 EXTAL IC INTO — 2 MPO, 1 NMI PGO — PG5 RXAO, 1 RXS XTAL	: ANALOG INF : BUS REQUES : CLEAR TO ! DATA CARR : DMA REQUE : EXTERNAL ! : INPUT CAPT : INTERPIT : : MOD PROGE : NON-MASKA : G-BIT INPUT : RECEIVE DA : RECEIVE DA : CLOCK	ST SEND FO HER DET ST FOR CLOCK URE WAM BLE INT OF POR TA FOR	ERRUPT RT G ASYNCHRO	SYNCH n (n = 1	RONOUS OR 1)	SCI CHA	ANNEL	. n (n = 0)) OR 1)
OUTPUT A0 — A19 BUSACK E IOE LIR ME RD REF RTSO, 1 ST TENDO, 1 TOUT1 — 3 TXAO, 1 TXS WR	ADDRESS BI BUS ACKNO EANBLE I/O ENABLE LOAD INSTE MEMORY EN READ REFRESH REOUEST TO STATUS TRANSFER I TRANSFER I TRANSFER I TRANSFER I WRITE SYSTEM CLO	WLEDGE RUCTION IABLE D SEND END FOR DATA FO	REGISTER FOR ASYNC R CHANNEL OR ASYNCHI	n (n =	O OR 1)				
INPUT/OUTPI CKAO, 1 CKS DO - D7 PAO - PA7 PBO - PB7 PCO - PC7 PDO - PD7 PEO - PE7 PFO - PF7	CLOCK FOR CLOCK FOR DATA BUS 8-BIT INPUT,	SERIAL OUTPU OUTPU OUTPU OUTPU	I/O PORT IT OF PORT	A B C D E	NNEL n (n=0 0	R 1)	ΒV	/E-2000

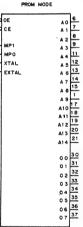
PIN		MODE 0		MODE 1		MODE 2	Р	ROM MODE
No.	1/01	SIGNAL	1/0	SIGNAL	1/0	SIGNAL	1/0	SIGNAL
41	-	PG2/AN2	1	PG2/AN2	1	PG2/AN2	-	NC
42		PG3/AN3	1	PG3/AN3	_	PG3/AN3	-	NC
43	1	PG4/AN4	1	PG4/AN4	-	PG4/AN4	1	NC
44	1	PG5/AN5	-	PG5/AN5	-	PG5/AN5	1	NC
45	0	RTS0	0	RTS0	0	RTS0	-	NC
46	1	CTS0	1	CTS0	1	CTS0	1	NC
47	1	DCD0	1	DCD0	1	DCD0	-	NC
48	0	TXA0	0	TXA0	0	TXA0	-	NC
49	1	RXA0	1	RXA0	- 1	RXA0	-	NC
50	1/0	CKAO/DREQ0	1/0	CKAO/DREQ0	1/0	CKAO/DREQ0	-	NC
51	0	TOUT2	0	TOUT2	0	TOUT2	-	NC
52	0	TOUT3	0	TOUT3	0	TOUT3	-	NC
53		IC	1	IC	1	IC	-	,NC
54	1/0	TXA1/PA0	1/0	TXA1/PA0	1/0	TXA1/PA0	-	'NC
55	1/0	RXA1/PA1	1/0	RXA1/PA1	1/0	RXA1/PA1	-	NC
56	1/0	CKA1/TENDO/PA2	1/0	CKA1/TENDO/PA2	1/0	CKA1/TENDO/PA2	-	NC
57	1/0	TXS/PA3	1/0	TXS/PA3	1/0	TXS/PA3	-	NC
58	1/0	RXS/CTST/PA4	1/0	RXS/CTST/PA4	1/0	RXS/CTST/PA4	-	NC
59	1/0	CKS/PA5	1/0	CKS/PA5	1/0	CKS/PA5	-	NC
60	1/0	DREQ1/PA6	1/0	DREQ1/PA6	1/0	DREQ1/PA6	-	NC
61	1/0	TEND1 / PA7	1/0	TEND1/PA7	1/0	TEND1/PA7	-	NC
62	1/0	PB7	0	HALT	0	HALT	-	NC
63	1/0	PB6	0	REF	0	REF	-	NC
64	1/0	PB5	0	IOE .	0	IOE	-	NC
65	1/0	PB4	0	ME	0	ME	-	NC .
66	1/0	PB3	0	E	0	E	-	NC
67	1/0	PB2	0	LIR	0	LIR	-	NC
68	1/0	PB1	0	WR	0	WR	-	NC
69	1/0	PBO	0	RD	0	RD	-	NC
70	-	GND	T-	GND	-	GND	l -	GND
71	0	ф	0	ф	0	ф	-	NC
72	Ť	MP1	1	MP1	1	MP1	1	MP1
73	1	MPO	ı	MP0	1	MP0	1	MP0
74		XTAL	T	XTAL	1	XTAL	1	XTAL
75	1.	EXTAL	1	EXTAL	1	EXTAL	T	EXTAL
76	1-	VDD	-	VDD	-	VDD	-	VDD
77	1/0	PE7	1	WAIT	1	WAIT	-	NC
78	1/0	PE6	0	BUSACK	0	BUSACK	-	NC
79	170	PE5	1	BUSREQ	ī	BUSREQ	-	NC
80	1	RESET	T	RESET	Ť	RESET	-	VPP



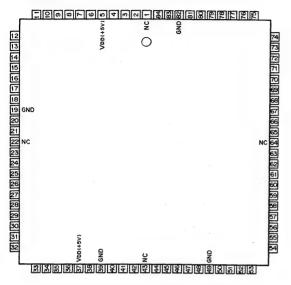
	MODE 0				MODE 1	
54	TAX1/PAO	PCO	6	54	TAXI/PAO	
55	RXA1/PA1	PC1	7	55	RXA1/PA1	
56	CKA1/TENDO/PA2	PC2	8	56	CKA1/ TENDO/P	
57	TXS/PA3	PC 3	9	57		'A2
58			11	58	TXS/PA3	
59	RXS/CTS1/PA4	PC 4	12	59	RXS/CTS1/PA	•
60	CKS/PA5	PC 5	13	60	CKS/PA5	
61	DREQ1 / PAG	PC 6	14	61	DREQ1/PAG	
-	TEND1/PA7	PC 7	Ë	-	TEND1/PA7	
69	PB 0	PD 0	15	30	DO	
68	PB 1	PD 1	16	31	D 1	
67	PB 2	PD 2	17	32	DZ	
66	PB 3	PD 3	18	33	D3	
65	PB 4	PD4	19	34	D 4	
64	PB 5	P0 5	20	35	0.5	
63	PB6	PD 6	21	36	D 6	
62	PB7		22	37		
	PB1	PD7		_	07	
39		PEO	23	39		
40	PGO / ANO		24	40	PGO/ANO	
41	PG1/AN1	PE 1	25	41	PG1/AN1	
42	PG2/AN2	PE 2	28	42	PG 2/AN2	
43	PG3/AN3	PE 3	5	43	PG3/AN3	
44	PG4/AN4	PE 4	79	44	PG4/AN4	
	PG5/AN5	PE 5	78	27	PG5/AN5	
٠,	NMI INT 0 INT 1 INT2 MP0 MP1	PE6	77			BU
~	NM1	PE 7			NMI	
÷	INT O			-6 0 las	INTO	
⊸ೆ	INT 1	PFO	30	_30	INT 1	1
-30	INT2	PF 1	31	4	INT 2	
73	MPO	PF 2	32	73	MPO	
72	MP1	PF3	33	72	MP1	
74	XTAL	PF4	34	74	XTAL	
75	EXTAL	PF5	35	75	EXTAL	
		PF6	36			
80	RESET	PF7	37	80	RESET	
460	ство			46	CTSO	
47		TOUT 1	26	47		_
49		TOUT 2	51	49		T
53	10	TOUT 3	52	53	RXAO	т
	10	3			1 C	T
50	CKAO/ DREGO		45	50		
	CHAUT DREGO	RTSO	48	79	CKAO/ DREGO	F
		TXAO	71	77	WAIT	1
		•	\vdash		BUSREQ	
			-			

_	54	TAX1/PAO	AO	6
<u>'</u> _	55	RXA1/PA1	A 1	7
	56	CKA1/ TENDO/PA	2 A 2	8
9_	57	TXS / PA3	A 3	9
1_	58	RXS/CTS1/PA4	A 4	11
2	59	CKS/PA5		12
3	60	DREQ1/PAG	A 6	13
4	61	TEND1/PAT	A 7	14
5	30	0.0	A 8	15
6	31	D1	A9	16
7	32	DZ	A1O	17.
8	33	D3	A11	18
9	34	D 4	A12	19
0	35	D 5		20
1	36	D6	A13	21
22	37	07	A15	22
:3	39			23
24	40	PGO/ANO		24
5	41	PG1/AN1	A17	25
28	42	PG 2/AN2	A18	28
5	43	PG3/AN3	A19	5
9	44	PG4/AN4	ST	۲
8	24	PG5/AN5		7.
7			BUSACK	<u>78</u>
-	0	NMI		l
30	<u> </u>	INTO		62
11	1490	INT 1	HALT	63
32	0 73	INT 2	REF	64
53	73	MPO		<u></u>
34		MP1	ME	65 66
35	74	XTAL	Ε	
36	75	EXTAL	LIR	67
37			WR	68 69
-	=0	RESET	RD	چھ
26		ство		26
51	470	DCD O	TOUT 1	
52	49	RXAO	T OUT2	51
=	53	1 C	TOUT3	52
45	50	CKAO/ DREGO	RTSO	45
48	79	WAIT	TXAO	48
71	777	BUSREQ	φ.	71
		PROM MOD)F	
_	22			٦,
7	23	OE	A O	
<u></u>	_	CE	A 1	
9	72	MP1	` A 2	-
11	73		A 3	1
12	74	MPU	A 4	
13	75	XIAL	A 5	_
14		EXTAL	A 6	
17		I	A 7	18
		!	A 8	1
16			A 9	17
			A10	
17			A 11	-
8			A1 2	
19				

	MODE 2	2	
54 55 56 57 58 59 60	TAX1/PA 0 RXA1/PA 1 CKA1/TENDO/I TXS/PA3 RXS/CTS1/PA- CKS/PA5 DREQ1/PA6 TEND1/PA7	A 3	6 7 8 9 11 12 13
30 31 32 33 34 35 36 37	D 1 D 2 D 3 D 4 D 5 D 6	A8 / PD 0 A9 / PD 1 A10 / PD 2 A11 / PD 3 A12 / PD 4 A13 / PD 5 A14 / PD 6 A15 / PD 7	15 16 17 18 19 20 21 22
39 40 41 42 43 44	PG1 / AN1 PG2 / AN2 PG3 / AN3 PG4 / AN4 PG5 / AN5	A16/ PE0 A17/ PE 1 A18/ PE 2 A19/ PE 3 ST BUSACK	23 24 25 28 5
73 74 73 72 74 75		HALT REF IOE ME E LIR	8 3 4 5 6 6 7 8
80 46 47 49 53	RESET CTS O DCDO RXAO IC	TOUT 1 TOUT 2 TOUT 3	26 51 52
79	CKAO/ DREGO WAIT BUSREG	RTSO TXAO	45 48 71



HD647180XOCP6 (HITACHI) C-MOS 8-BIT MICRO PROCESSING UNIT - TOP VIEW -

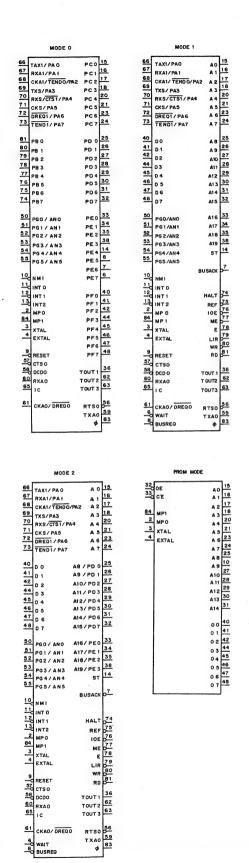


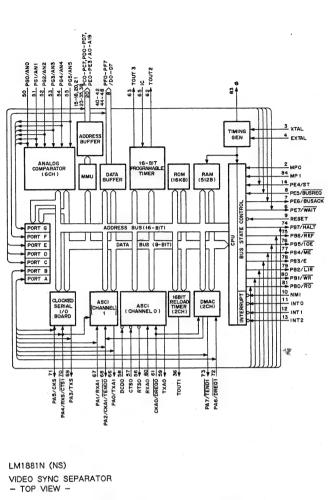
PIN		MODE 0	T	MODE 1	Т	MODE 2	F	PROM MODE
No.	1/0	SIGNAL	1/0	SIGNAL	1/0	SIGNAL	1/0	SIGNAL
1	-	NC	1 -	NC	-	NC	-	NC
2		MPO	1	MPO	1	MPO	1	MP0
3	1	XTAL	1	XTAL	1	XTAL	1	XTAL
4	1	EXTAL		EXTAL	1	EXTAL	1	EXTAL
5	-	VDD	T -	VDD	-	VDD	-	VDD
6	1/0	PE7	J	WAIT		WAIT	-	NC
7	1/0	PE6	0	BUSACK	0	BUSACK	-	NC
8	1/0	PE5		BUSREQ		BUSREQ	-	NC
9	1	RESET	1	RESET	1	RESET	-	VPP
10	1	NMI		NMI	1	NMI	0	A9
11	1	INTO	1	INTO	1	INTO	-	NC
12	-	INT1	1	INT1		INT1	-	NC
13	-	INT2	1	INT2	1	INT2	-	NC
14	1/0	PE4	0	ST	0	ST	-	NC
15	1/0	PC0	0	AO	0	A0	٥	A0
16	1/0	PC1	0	. A1	0	A1	0	. A1
17	1/0	PC2	0	A2	0	A2	0	A2
18	1/0	PC3	0	A3	0	A3	0	A3
19	- 1	GND	-	GND	-	GND	-	GND
20	1/0	PC4	0	A4	0	A4	0	A4
21	1/0	PC5	0	A5	0	A5	0	A5
22	-	NC	-	NC	-	NC	-	NC
23	1/0	PC6	0	A6	0	A6	0	A6
24	1/0	PC7	0	A7	0	A7	0	A7
25	1/0	PD0	0	A8	1/0	A8/PD0	0	A8
26	1/0	PD1	0	A9	1/0	A9/PD1	-	NC
27	1/0	PD2	0	A10	1/0	A10/PD2	0	A10
28	1/0	PD3	0	A11	1/0	A11/PD3	0	A11
29	1/0	PD4	0	A12	1/0	A12/PD4	0	A12
30	1/0	PD5	0	A13	1/0	A13/PD5	0	A13
31	1/0	PD6	0	A14	1/0	A14/PD6	0	A14
32	1/0	PD7	0	A15	1/0	A15/PD7		OE
33	1/0	PEO	0	A16	1/0	A16/PE0	1	CE
34	1/0	PE1	0	A17	1/0	A17/PE1	-	NC
35	1/0	PE2	0	A18	1/0	A18/PE2	-	NC
36	0	TOUT1	0	TOUT1	0	TOUT1	-	NC
37	-	VDD	-	Voo	-	VDD	-	VDD
38	1/0	PE3	0	A19	1/0	A19/PE3	-	NC
39	-	GND	-	GND	-	GND	-	GND
40	1/0	PF0	1/0	D0	1/0	D0	0	00
41	1/0	PF1	1/0	D1	1/0	D1	0	01
42	1/0	PF2	1/0	D2	1/0	D2	0	02

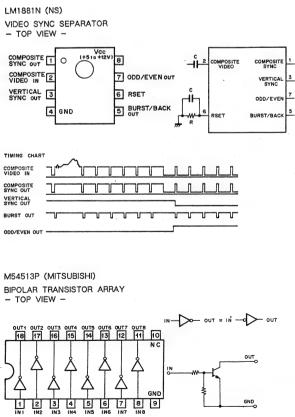
PIN		MODE 0		MODE 1		MODE 2	PROM MODE		
No.	1/0	SIGNAL	1/0	SIGNAL	1/0	SIGNAL	1/0	SIGNAL	
43	_	NC	-	NC		NC	-	NC	
44	1/0	PF3	1/0	D3	1/0	D3	0	03	
45	1/0	PF4	1/0	D4	1/0	D4	0	04	
46	1/0	PF5	1/0	D5	1/0	D5	0	05	
47	1/0	PF6	1/0	D6	1/0	D6	0	06	
48	1/0	PF7	1/0	D7	1/0	D7	0	07	
49	-	GND	-	GND	-	GND	-	GND	
50		PG0/AN0	1	PGO/ANO	1	PG0/AN0	-	NC	
51	1	PG1/AN1	1	PG1/AN1	1	PG1/AN1	-	NC	
52	1	PG2/AN2		PG2/AN2	1	PG2/AN2	-	NC	
53	1	PG3/AN3	1	PG3/AN3	1	PG3/AN3	-	NC	
54	1	PG4/AN4	1	PG4/AN4	1	PG4/AN4	-	NC	
55	1	PG5/AN5	1	PG5/AN5	1	PG5/AN5	_	NC	
56	0	RTS0	0	RTS0	0	RTS0	-	NC	
57	1	CTS0	1	CTS0	1	CTS0	-	NC	
58	1	DCD0	1	DCD0	1	DCD0	_	NC	
59	0	TXA0	0	TXA0	0	TXAO	-	NC	
60	- 1	RXA0	1	RXA0	1	RXA0	_	NC	
61	1/0	CKA0/DREQ0	1/0	CKA0/DREQ0	1/0	CKA0/DREQ0	_	NC	
62	0	TOUT2	0	TOUT2	0	TOUT2	_	NC	
63	0	TOUT3	0	TOUT3	0	TOUT3	_	NC	
64	-	NC	-	NC	-	NC	_	NC	
65	1	IC		IC	1	IC	_	NC	
66	1/0	TXA1/PA0	1/0	TXA1/PA0	1/0	TXA1/PA0	_	NC	
67	1/0	RXA1/PA1	1/0	RXA1/PA1	1/0	RXA1/PA1	_	NC	
68	1/0	CKA1/TENDO/PA2	1/0	CKA1/TENDO/PA2			_	NC	
69	1/0	TXS/PA3	1/0	TXS/PA3	1/0	TXS/PA3	_	NC	
70	1/0	RXS/CTSI/PA4	1/0	RXS/CTST/PA4	1/0	RXS/CTST/PA4	-	NC	
71	1/0	CKS/PA5	1/0	CKS/PA5	1/0	CKS/PA5	-	NC	
72	1/0	DREQ1/PA6	1/0	DREQ1/PA6	1/0	DREQ1/PA6	_	NC	
73	1/0	TEND1/PA7	1/0	TEND1/PA7	1/0	TENDI/PA7	_	NC	
74	1/0	PB7	0	HALT	0	HALT	_	NC	
75	1/0	PB6	0	REF	ō	REF	_	NC	
76	1/0	PB5	0	IOE	ō	IOE	_	NC	
77	1/0	PB4	0	ME	0	ME	_	NC	
78	1/0	PB3	0	E	0	E	_	NC	
79	1/0	PB2	0	LIR	0	LIR	_	NC	
80	1/0	PB1	0	WR	0	WR.	_	NC	
81	1/0	PB0	0	RD	0	· RD	-	NC NC	
82	-	GND	_	GND		GND	_	GND	
83	0	ф.	0	Φ.	0	φ b	_	NC	
84	Ť	MP1	Ť	MP1		MP1	-	MP1	

```
INPUT

ANO — AN5
BUSREQ
BUSREQ
CTSQ. 1: QLEAR TO SEND FOR ASYNCHRONOUS SCI CHANNEL n (n=0 OR 1)
DCDQ. 1: DATA CARRIER DETECT FOR ASYNCHRONOUS SCI CHANNEL n (n=0 OR 1)
DCDQ. 1: DATA CARRIER DETECT FOR ASYNCHRONOUS SCI CHANNEL n (n=0 OR 1)
EXTAL
EXTERNAL CLOCK
INTO — 2: INTERRUPT
MOD. 1: MOD PROGRAM
NOI. 1: MOD PROGRAM
NOI. NON-MASKABLE INTERRUPT
PORT G
BUSACK
BUSAC
```





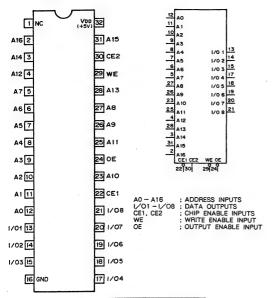


5 6 7 8 9 INS ING INT INB

4 IN4

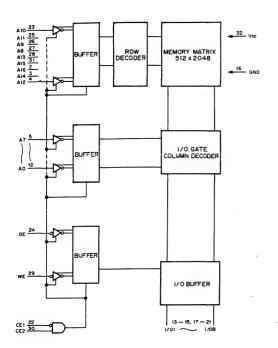
GND

HM628128LFP-10 (HITACHI) FLAT PACKAGE C-MOS 131072-WORDx8-BIT HIGH SPEED STATIC RAM - TOP VIEW -



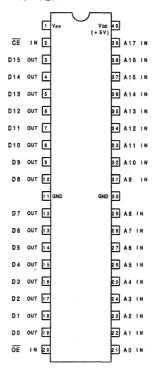
CE1	CE2	OE	WE	MODE	I/O TERMINAL
1	Х	Х	Х	NOT SELECT	HI-Z
X	0	Х	X	NOT SELECT	HŀZ
0	1	1	1	OUTPUT DISABLE	HI-Z
0	1	0	1	READ	DATA OUTPUT
0	1	Y	0	WRITE	DATA INPUT

: LOW LEVEL : HIGH LEVEL : DON'T CARE : HIGH IMPEDANCE



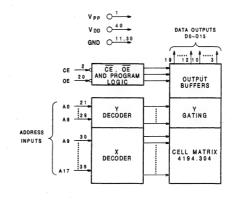
M27C4002-12F1 (SGS)

C-MOS 4M(256k×16)-BIT UV EPROM - TOP VIEW -





A0-A17 : ADDRESS INPUTS
CE : CHIP ENABLE
D0-D15 : DATA OUTPUTS
OE : OUTPUT ENABLE
'PROGRAMMING VOLTAGE
(PROGRAM :+12.75V)



ABOVE DIAGRAM SHOWS CONDITIONS BEFORE PROGRAMMING.

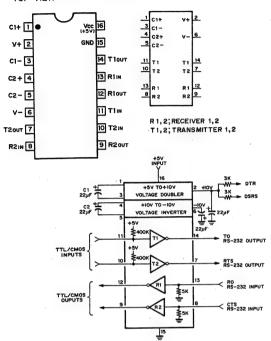
ÇE	OE	A 9	VPP	OUTPUT	FUNCTION
0	0	×	×	DOUT	READ
0	1	×	×	H1-Z	OUTPUT DISABLE
0	1	Х	VPP	DIN	PROGRAM
1	0	. х	VPP	Dout	VERIFY
1	1	х	VPP	HI-Z	PROGRAM INHIBIT
1	×	x	×	H I - Z	STANDBY
0	0	· VH	V DD	CODE	EIECTRONIC SIGNATUR

1 ;HIGH LEVEL
0 ;LOW LEVEL
× ;DON'T CARE
VH ;12.0 ± 0.5 V
HI-Z :HIGH IMPEDANCE

MAX232N (TI)

RS-232 TRANSMITTER/RECEIVER

- TOP VIEW -

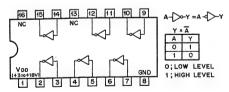


MB4002PF (FUJITSU) FLAT PACKAGE HIGH SPEED VOLTAGE COMPARATOR - TOP VIEW -

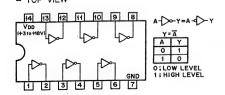


MC14049UBF (MOTOROLA) FLAT PACKAGE TC4049BP (TOSHIBA)

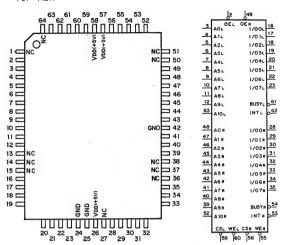
C-MOS INVERTING TYPE BUFFER/CONVERTER - TOP VIEW -



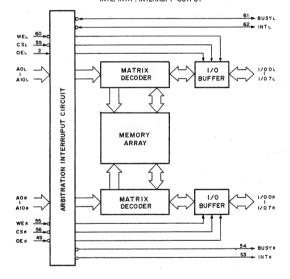
MC14069UBF (MOTOROLA) C-MOS INVERTER - TOP VIEW -



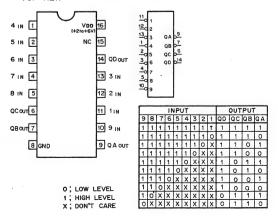
MB8421-90LPFQ (FUJITSU) (ACCESS TIME = 90nS) FLAT PACKAGE C-MOS 16384 (2Kx8) BIT DUAL PORT STATIC RAM - TOP VIEW -



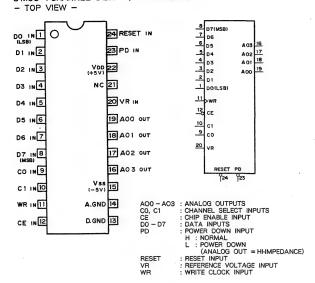
AOL — AIOL. AOR — AIOR: ADDRESS INPUTS
I/OOL — I/OTL, I/OOR — I/OTR; DATA INPUTS/OUTPUTS
CSL, CSR; CHIP SELECT INPUT
WEL, WER; WRITE ENABLE INPUT
OEL, OER; OUTPUT ENABLE INPUT
BUSYL, BUSYR; BUSY OUTPUT
INTL, INTR; INTERRUPT OUTPUT



MC74HC147F (MOTOROLA) FLAT PACKAGE C-MOS 10-TO-4-LINE PRIORITY ENCODER - TOP VIEW -



MB86023 (FUJITSU) FLAT PACKAGE C-MOS 4-CHANNEL 8-BIT D/A CONVERTER



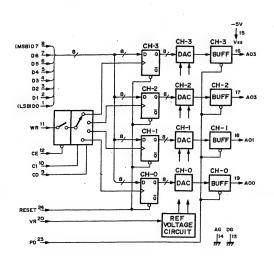
FUNCTION SELECT

CC	NTRO	OL IN	PUTS			LA	ГСН	
RESET	CE	WR	C1	CO	CH-3	CH-2	CH-1	CH-0
1	0	7_5	0	0	HOLD	HOLD	HOLD	WRITE
1	0	T	. 0	1	HOLD	HOLD	WRITE	HOLD
1	0	T	1	0	HOLD	WRITE	HOLD	HOLD
1	0	T	1	1	WRITE	HOLD	HOLD	HOLD
1	1	X	X	Х	HOLD	HOLD	HOLD	HOLD
0	X	X	X	Х	RE	SET TO	100000	000

D/A CONVERSION

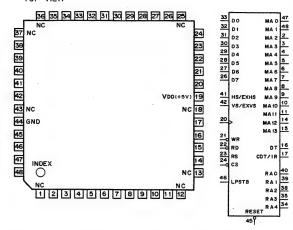
		D.	ATA	INPUT	S			OUTPUT VOLT	AGE
D7	D6	D5	D4	D3	D2	D1	DO	VR = OPEN	VR = V1
1	1	1	1	1	1	1	1	255/512VDD	255/256V1
1	1	1.	1	1	1	1	0	253/512VDD	253/256V1
1	1	1	1	1	1	0	1	251/512VDD	251/256V1
-							-		
1	0	0	0	0	0	0	1	3/512Vpp	3/256V1
1	0	0	0	0	0	0	0	1/512VDD	1/256V1
0	1	1	1	1	1	1	1	- 1/512VDD	- 1/256V1
0	1	1	1	1	1	1	0	-3/512VDD	-3/256V1
_							-		
0	0	0	0	0	0	1	0	- 251/512Vpp	- 251/256V1
0	0	0	0	0	0	0	1	- 253/512Vpp	- 253/256V1
0	0	0	0	0	0	0	0	- 255/512Vpb	- 255/256V1

0 : LOW LEVEL 1 : HIGH LEVEL X : DON'T CARE

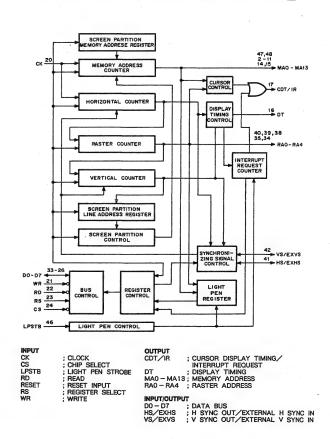


MB89322APFQ (FUJITSU) FLAT PACKAGE

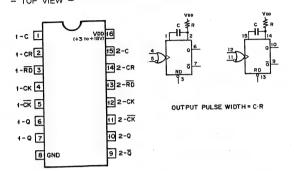
C-MOS PROGRAMMABLE CRT (CATHODE-RAY TUBE) CONTROLLER - TOP VIEW -

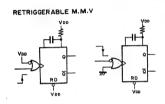


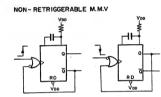
PIN No.	1/0	SIGNAL	PIN No.	1/0	SIGANL	PIN No.	1/0	SIGNAL	PIN No.	1/0	SIGNAL
1	-	NC	13	-	NC	25	-	NC	37	-	NC
2	0	MA2	14	0	MA12	26	1/0	D7	38	0	RA2
3	0	MA3	15	0	MA13	27	1/0	D6	39	0	RA1
4	0	MA4	16	0	DT	28	1/0	D5	40	0	RAO
5	0	MA5	17	0	CDT/IR	29	1/0	D4	41	1/0	HS/EXHS
6	0.	MA6	18	-	NC	30	1/0	D3	42	1/0	VS/EXVS
7	0	MA7	19	-	VDD (+5V)	31	1/0	D2	43	-	NC
8	0	MA8	20	1	CK	32	1/0	D1	44	-	GND
9	0	MA9	21	1	WR	33	1/0	DO	45	1	RESET
10	0	MA10	22	1	RD	34	0	RA4	46	1	LPSTB
11	0	MA11	23	1	RS	35	0	RA3	47	0	MAO
12	-	NC	24	1	CS	36	-	NC	48	C	MA1



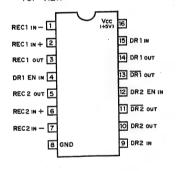








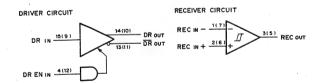
MC34051P (MOTOROLA) RS-422 DRIVER/RECEIVER - TOP VIEW -



DR EN	MODE
0	DISABLE
1	ENABLE

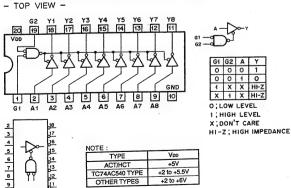
O ; LOW LEVEL 1 ; HIGH LEVEL

DR ; DRIVER DR EN ; DRIVER ENABLE REC ; RECEIVER

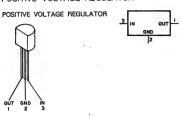


MC74HC540N (MOTOROLA) SN74HC540ANS (TI) FLAT PACKAGE SN74HCT540ANS (TI) FLAT PACKAGE

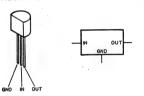
C-MOS 3-STATE INVERTING BUFFER/LINE DRIVER/LINE RECEIVER - TOP VIEW -



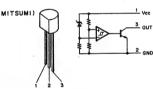
NJM78L09A (JRC) + 9V (100mA) POSITIVE VOLTAGE REGULATOR



NJM79L05A (JRC) - 5V NJM79L09A (JRC) - 9V NEGATIVE VOLTAGE REGULATOR (100mA)

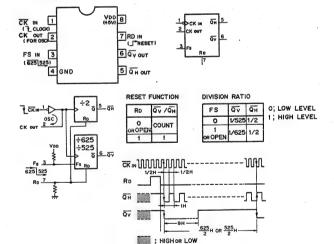


PST529C (MITSUMI) Vs = 4.5V PST529H (MITSUMI) Vs = 3.1V VOLTAGE DETECTOR, SYSTEM RESET

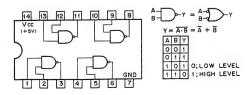


SM6430C (NPC)

C-MOS OSC, 1/2 AND 1/525 OR 1/625 DIVIDER - TOP VIEW -

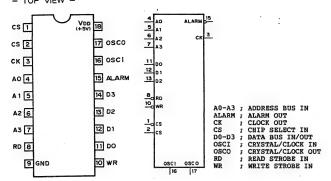


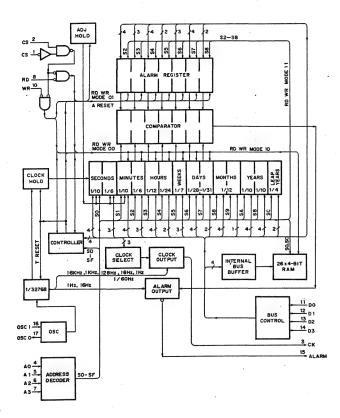
SN74ALS00ANS (TI) FLAT PACKAGE TTL 2-INPUT POSITIVE-NAND GATE - TOP VIEW -



RF5C15 (RICOH) FLAT PACKAGE

C-MOS REAL TIME CLOCK - TOP VIEW -

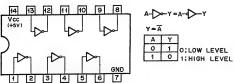




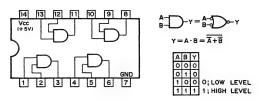
SN74ALS04BNS (TI) FLAT PACKAGE

TTL INVERTER - TOP VIEW -

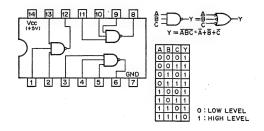




SN74ALS08NS (TI) FLAT PACKAGE TTL 2-INPUT POSITIVE-AND GATE — TOP VIEW —

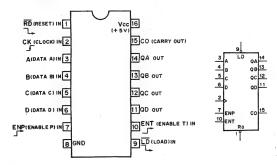


SN74ALS10ANS (TI) FLAT PACKAGE TTL 3-INPUT POSITIVE NAND GATE - TOP VIEW -



SN74ALS163BNS (TI) FLAT PACKAGE

TTL PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER - TOP VIEW -



RD	LD	ENP	ENT	WODE	
0	×	×	×	RESET (SYNCHRONOUS)	
1	0	×	×	PRESET (SYNCHRONOUS)	
1	1	0	Х	NO COUNT	
1	1	X	.0	NO COUNT	
1	1	1	1	COUNT	

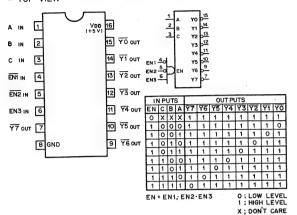
CARRY OUTPUT "CO"

OR OC CO

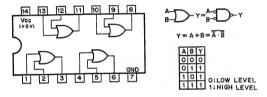
ENT OD IS HIGH WHEN ENT INPUT IS
HIGH AND COUNT IS "IS"."

COUNT SE	QUEN			
COUNT			PUTS	
COON	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	0 1		1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

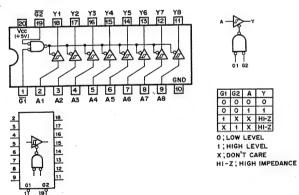
SN74ALS138NS (TI) FLAT PACKAGE TTL 3-TO-8-LINE DECODER/DEMULTIPLEXER TOP VIEW -



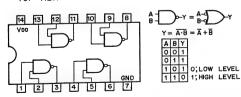
SN74ALS32NS (TI) FLAT PACKAGE TTL 2-INPUT POSITIVE-OR GATE - TOP VIEW -



SN74ALS541NS (TI) FLAT PACKAGE TTL BUFFERS AND LINE DRIVERS WITH 3-STATE OUTPUTS

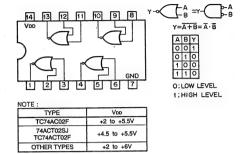


SN74HC00ANS (TI) FLAT PACKAGE C-MOS QUAD 2-INPUT NAND GATES - TOP VIEW -

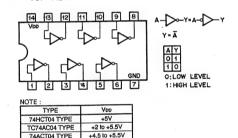


	_
Voo	
+2 to +5.5V	
+5V	
+4.5 to +5.5V	
+2 to +6V	
	+2 to +5.5V +5V +4.5 to +5.5V

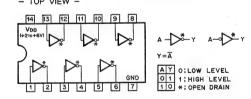
SN74HC02ANS (TI) FLAT PACKAGE C-MOS QUAD 2-INPUT NOR GATES - TOP VIEW -



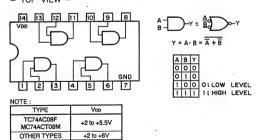
SN74HC04ANS (TI) FLAT PACKAGE SN74HCU04ANS (TI) FLAT PACKAGE C-MOS HEX INVERTERS - TOP VIEW -



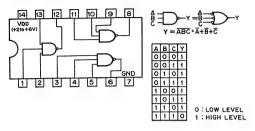
SN74HC05ANS (TI) FLAT PACKAGE C-MOS HEX INVERTER WITH OPEN-DRAIN



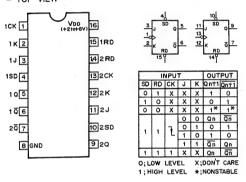
SN74HC08ANS (TI) FLAT PACKAGE C-MOS QUAD 2-INPUT AND GATES - TOP VIEW -



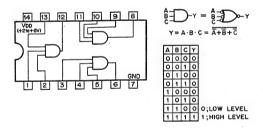
SN74HC10ANS (TI) FLAT PACKAGE C-MOS 3-INPUT NAND GATE - TOP VIEW -



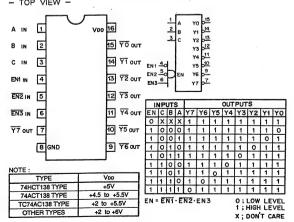
SN74HC112ANS (TI) FLAT PACKAGE
C-MOS J-K FLIP-FLOP WITH DIRECT SET/RESET
- TOP VIEW -



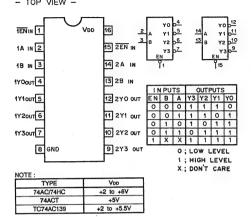
SN74HC11ANS (TI) FLAT PACKAGE C-MOS 3-INPUT POSITIVE-AND GATE



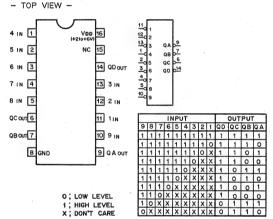
SN74HC138ANS (TI) FLAT PACKAGE C-MOS 3-TO-8 LINE DECODER/DEMULTIPLEXER - TOP VIEW -



SN74HC139ANS (TI) FLAT PACKAGE C-MOS DUAL 2-TO-4 DECODER/DEMULTIPLEXER - TOP VIEW -

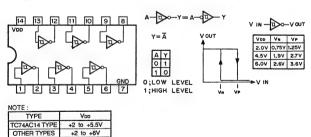


SN74HC147NS (TI) FLAT PACKAGE C-MOS 10-TO-4-LINE PRIORITY ENCODER - TOP VIEW -

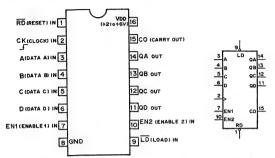


SN74HC14ANS (TI) FLAT PACKAGE

C-MOS HEX SCHMITT TRIGGER INVERTERS - TOP VIEW -



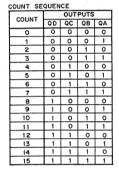
SN74HC161ANS (TI) (V $_{\infty}$ = +2 to +6V) FLAT PACKAGE C-MOS SYNCHRONOUS PRESETTABLE 4-BIT BINARY COUNTER - TOP VIEW -



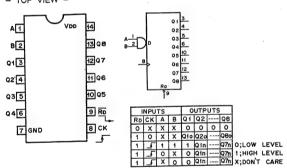
		_ INF		
RD	LD	EN1	EN2	
0	×	×	×	RESET (ASYNCHRONOUS)
1	0	×	×	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

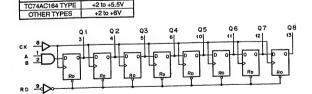
O; LOW LEVEL 1; HIGH LEVEL X; DON'T CARE

CARRY OUTPUT "CO"



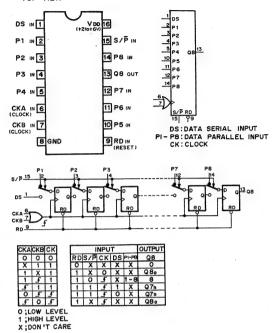
SN74HC164ANS (TI) FLAT PACKAGE
C-MOS 8-BIT SERIAL-IN/PARALLEL-OUT SHIFT REGISTER





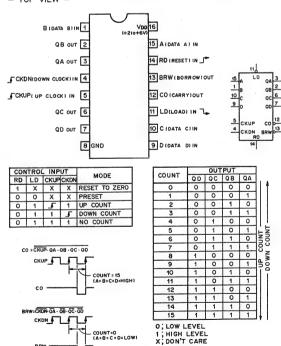
Voo

SN74HC166ANS (TI) FLAT PACKAGE C-MOS 8-BIT SHIFT REGISTER — TOP VIEW —



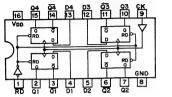
SN74HC193AN (TI) SN74HC193ANS (TI) FLAT PACKAGE

C-MOS PRESETTABLE SYNCHRONOUS 4-BIT UP/DOWN COUNTER - TOP VIEW -



NOTE:

SN74HC175ANS (TI) FLAT PACKAGE C-MOS QUAD D-TYPE FLIP-FLOPS WITH RESET - TOP VIEW -

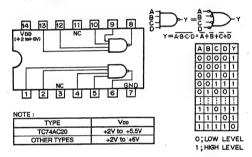




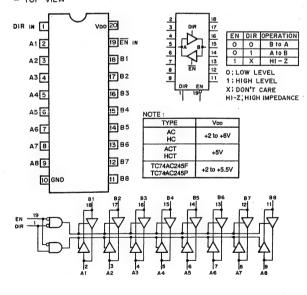
	RD	CK	٥	Q	Q
	0	X	Х	0	1
	1	5	1	1	0
	1	5	0	0	1
	1	0	X	å	o _o
q) , L i , i k , c	IO C	T C	ARE	

TYPE V00
TC74AC175F +2 to +5.5Y
74ACT175 TYPE +4.5 to +5.5V
OTHER TYPES +2 to +6V

SN74HC20ANS (TI) FLAT PACKAGE C-MOS 4-INPUT POSITIVE-NAND GATE - TOP VIEW -



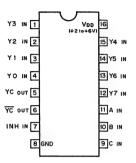
SN74HC245ANS (TI) FLAT PACKAGE C-MOS BILATERAL BUS TRANSCEIVERS WITH 3-STATE OUTPUTS - TOP VIEW -

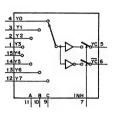


SN74HC251ANS (TI) FLAT PACKAGE

C-MOS 8-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER WITH 3-STATE OUTPUT

- TOP VIEW -

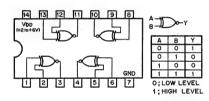




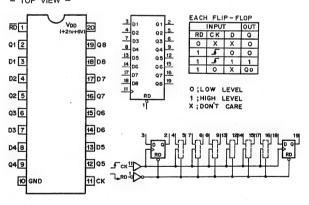
CC	NTR	OUT	PUT		
С	В	Α	INH	YC	YC
X	X	X	1	HI-Z	HI-Z
0	0	0	0	YO	YO
0	0	1	0	Y1	YI
0	1	0	0	Y2	<u>Y2</u>
0	1	1	0	Y3	73
1	0	0	0	Y4	Y 4
1	0	1	0	Y5	Y5
1	1	0	0	Y6	Y6
1	1	1	0	Y7	¥7

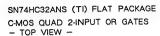
- O ; LOW LEVEL 1 ; HIGH LEVEL HI-Z; HIGH IMPEDANCE

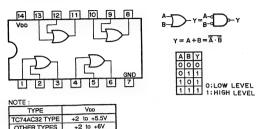
SN74HC266NS (TI) FLAT PACKAGE C-MOS 2-INPUT EXCLUSIVE-NOR GATE - TOP VIEW -



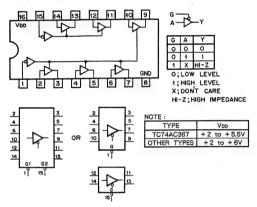
SN74HC273ANS (TI) FLAT PACKAGE C-MOS OCTAL D-TYPE FLIP-FLOPS WITH RESET - TOP VIEW -



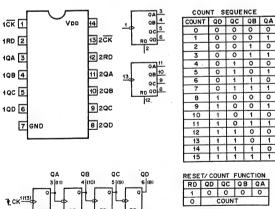




SN74HC367ANS (TI) FLAT PACKAGE C-MOS BUS DRIVER WITH 3-STATE OUTPUTS - TOP VIEW -



SN74HC393ANS (TI) FLAT PACKAGE C-MOS DUAL 4-BIT BINARY COUNTER - TOP VIEW -

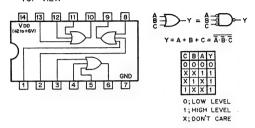


O; LOW LEVEL

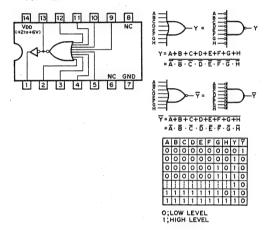
₹ CK ¹⁽¹³⁾	RP C	RD	RD
_RD 2(12)			

NOTE :	
TYPE	Vpp
74AC	+2 to 5.5V
74HC	+2 to 6V

SN74HC4075ANS (TI) FLAT PACKAGE C-MOS 3-INPUT OR GATE - TOP VIEW -

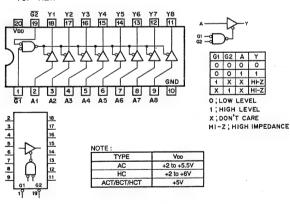


SN74HC4078BNS (TI) FLAT PACKAGE C-MOS 8-INPUT OR/NOR GATE - TOP VIEW -

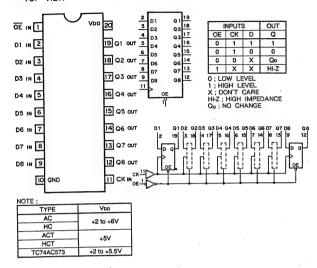


SN74HC541ANS (TI) FLAT PACKAGE

C-MOS BUFFERS AND LINE DRIVERS WITH 3-STATE OUTPUTS - TOP VIEW -

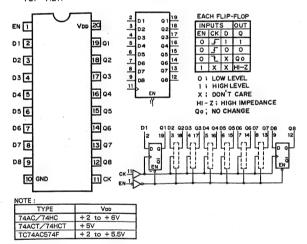


SN74HC573BNS (TI) FLAT PACKAGE C-MOS 3-STATE OUTPUTS OCTAL LATCHES - TOP VIEW -



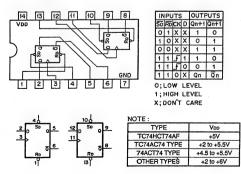
SN74HC574ANS (TI) FLAT PACKAGE TC74AC574F (TOSHIBA) FLAT PACKAGE

C-MOS 3-STATE D-TYPE EDGE-TRIGGERED FLIP-FLOP - TOP VIEW -



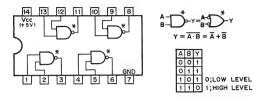
SN74HC74AN (TI) SN74HC74ANS (TI) FLAT PACKAGE

C-MOS DUAL D-TYPE FLIP-FLOPS WITH DIRECT SET/RESET - TOP VIEW -



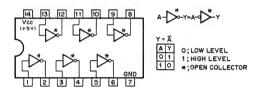
SN74LS03NS (TI) FLAT PACKAGE

TTL 2-INPUT POSITIVE-NAND GATE WITH OPEN-COLLECTOR - TOP VIEW -



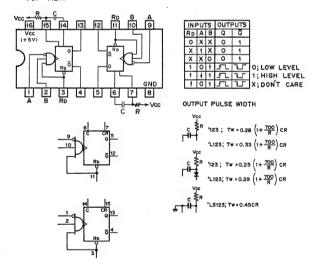
SN74LS06NS (TI) FLAT PACKAGE

TTL INVERTER BUFFER/DRIVER WITH OPEN-COLLECTOR - TOP VIEW -



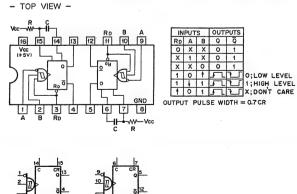
SN74LS123NS (TI) FLAT PACKAGE

TTL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR WITH DIRECT RESET - TOP VIEW -

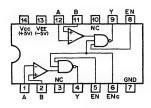


SN74LS221NS (TI) FLAT PACKAGE

TTL MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT



SN75207BNS (TI) FLAT PACKAGE BIPOLAR LINE RECEIVER (TTL COMPATIBLE) - TOP VIEW -

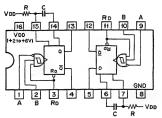


INPUTS			OUT
B - A	EN	ENc	Y
	X	0	1
8-A≧10mV	0	X	1
	1	1	0
	X	0	1
[B-A <10m∨	0	X	1
	1	1	*
B - A ≦ -10m V	X	X	1
0.1			

O; LOW LEVEL 1; HIGH LEVEL X; DON'T CARE *; INDETERMINATE

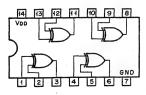
TC74HC221AF (TOSHIBA) FLAT PACKAGE

C-MOS MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT - TOP VIEW -



	IN	PUT	s	OUT	PUTS	
	RD	Α	В	Q	Q	
	0	Х	X	0	1	
	Х	1	Х	0	1	
	Х	Х	0	0	1	
	1	0	1	7	L	O; LOW LEVEL
	1	+	1	5	L	1; HIGH LEVEL
	†	0	1	5	L	X; DON'T CARE
ou	ITPU	T P	ULS	E WI	DTH:	0.7CR

TC74HC86AF (TOSHIBA) FLAT PACKAGE C-MOS QUAD EXCLUSIVE OR GATES - TOP VIEW -



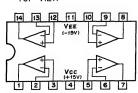


NOTE :	
TYPE	Vop
TC74AC86 TYPE	+2 to +5.5V
OTHER TYPES	+2 to +6V

TL062CPS (TI) FLAT PACKAGE TL082CPS (TI) FLAT PACKAGE OPERATIONAL AMPLIFIER (JFET INPUT) - TOP VIEW -

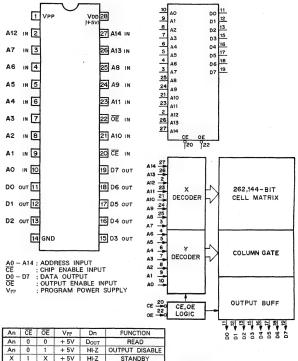


TL084CNS (TI) FLAT PACKAGE OPERATIONAL AMPLIFIER (J FET-INPUT) - TOP VIEW -



TMS27C256-20JL (TI)

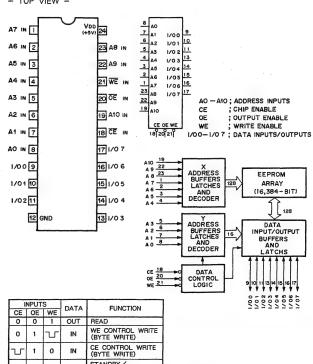
C-MOS 256K (32Kx8)-BIT ERASABLE PROM WITH 3-STATE OUTPUTS



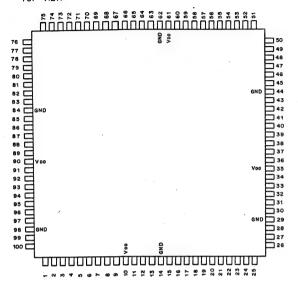
/3/1	0.0	02	A L.L.	D11	1014011014	8 6 8 8
An	0	0	+ 5V	Dout	READ	
An	0	1	+ 5V	HI-Z	OUTPUT DISABLE	
Х	1	Х	+ 5V	HI-Z	STANDBY	
An	0	- 1	+ 21V	DIN	PGM	0: LOW LEVEL
An	0	0	+ 21V	Dour	PGM VERIFY	1: HIGH LEVEL X: DON'T CARE
X	1	1	+ 21V	HI-Z	PGM INH	HI-Z : HIGH IMPEDANCE

X2816CP-20 (XICOR)

N-MOS 2K (2048x8)-BIT ELECTRIC ERASABLE PROM



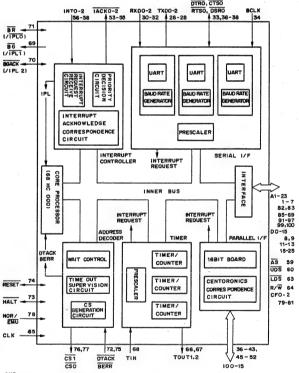
TMP68301F-12 (TOSHIBA) C-MOS 16-BIT MICRO PROCESSOR - TOP VIEW -



SIGNAL	1/0	PIN NO.	SIGNAL	1/0	PIN NO.	SIGNAL	1/0	PIN NO.	SIGNAL	VO	PIN NO.
CS1	0	76	IO1/DATA2	1/0	51	TXD2	0	26	A17	1/0	1
CSO	0	77	IO0/DATA1	1/0	52	TXD1	0	27	A18	1/0	2
NOR/EML	1	78	IACK2	0	53	TXD0	0	28	A19	1/0	3
FC2	1/0	79	IACK1	0	54	GND	ı	29	A20	1/0	4
FC1	1/0	80	IACKO	0	55	RXD2		30	A21	1/0	5
FC0	1/0	81	INT2		56	RXD1		31	A22	1/0	6
A1	1/0	82	INT1	-	57	RXD0		32	A23	0/	7
A2.	1/0	83	INTO	1	58	RTSO	1/0	33	D15	1/0	8
GND	_	84	ĀS	1/0	59	BCLK		34	D14	0/	9
A3	10	85	UDS	1/0	60	Vpo (+5.0 V)	-	35	Voo (+5.0 V)	_	10
A4	VO	86	Voo (+5.0 V)	_	61	IO15/DTRO	1/0	36	D13	1/0	11
A5	VO	87	GND		62	IO14/DSRO	1/0	37	D12	0/1	12
A6	1/0	88	LDS	1/0	63	IO13/CTSO	1/0	38	D11	0/	13
A7	VO	89	R/W	1/0	64	IO12/FAULT	I/O.	39	GND	-	14
VDD (+5.0 \	_	90	CLK	1	65	IO11/PRIME	1/0	40	D10	1/0	15
A8	VO	91	TOUT2	0	66	IO10/ACK	1/0	41	D9	1/0	16
A9	1/0	92	TOUT1	0	67	IO9/BUSY	VO	42	D8	1/0	17
A10	1/0	93	TIN	_	68	IO8/DSTB	1/0	43	D7	1/0	18
A11	1/0	94	BG/IPL1	0	69	GND	-	44	D6	1/0	19
A12	1/0	95	BGACK/IPL2	9	70	IO7/DATA8	1/0	45	D5	1/0	20
A13	1/0	96	BR/IPL0	1/0	71	IO6/DATA7	1/0	46	D4	20	21
A14	1/0	97	DTACK	1	72	IO5/DATA6	1/0	47	D3	9	22
GND	_	98	HALT	1/0	73	IO4/DATA5	1/0	48	D2	1/0	23
A15	1/0	99	RESET	1/0	74	IO3/DATA4	1/0	49	D1	1/0	24
A16	VO	100	BERR	1	75	IO2/DATA3	1/0	50	- D0	1/0	25

	69	170 171			
	BG/ BG	SACK/ BR/			
7	IPLA IP	D15	8	INPUT	
6	A23 A22	D14	9	BCLK	: BAUD RATE CLOCK
5	A21	D13	11	BERR	:BUS ERROR
4	A20	D12	12	CLK	: CLOCK
3	A19	D11	13	DTACK	: DATA TRANSFER
2	A18	D10	15		ACKNOWLEDGE
1	A17	D9	16	INTO-2	INTERRUPT REQUESTS
100	A16	08	17	NOR/EMU	: MODE SELECT
99	A15	07	18	RXD0-2	: RECEIVE DATA
97	Δ14	. De	19	TIN	TIMER INPUT
96	A13	· 05	20	108	, HMEN HIFOT
95	A12	D4	21	OUTPUT	
94	A11	D3	22		- PLUS COCUMO
93	A10	02	23	BG (/IPL1)	; BUS GROUND
92	A9	D1	24	CS0, 1	; CHIP SELECTS
91	AB	DO	25	IACK0-2	; INTERRUPT ACKNOWLEDGE
89				TOUT1, 2	; TIMER OUTPUTS
88	146	1015/ DTRO	36	TXD0-2	; TRANSFER DATA
87	143	1014/ DSRO	37		
86		1013/ CTSO	38	INPUT/OUTPUT	
85		1012/ FAULT	40	A1-23	; ADDRESS BUS
83	1A2	1011/PRIME		ACK	; VO PORT
82	A1	1010/ ACK	41	AS	; ADDRESS STROBE
		109 / BUSY	43	BGACK (/IPL2)	; BUS GROUND ACKNOWLEDGE
59		108 / DSTB	45	BR (/IPLO)	; BUS REQUEST
60		107/DATA8	46	BUSY	; VO PORT
63	7-5-	IO6 / DATA7	47	CTSO, DSRO, DTRO, DSTB	; VO PORTS
79		IOS / DATA6	48	D0-15	: DATA BUS
80	FC2	104 / DATAS	49	DATA1-8	: VO PORTS
81	7,50	103/DATA4	50	FAULT	: VO PORT
	FC O	102/DATA3		FC0-2	: FUNCTION CORDS
33	RTSO	101/DATA2	52	HALT	: HALT
34	BCLK	100/DATA1	-	100-15	: VO PORT
30			26	LDS	:LOWER DATA STROBE
31	RXDZ	TXD2	27	PRIME	: VO PORT
32	JRXUI	TX D1	28	RESET	: RESET
_	TRXDO	IXDO	1	RTSO	: TRANSFER REQUEST
56		1ACK2	53 54	R/W	: READ/WRITE
5	HINI 1	IACKI			
5	INTO	IACKO	þ <u>ss</u>	UDS	;UPPER DATA STROBE
68	TIN	TOUT 2	lee		
_	7.'''	TOUT 1	67		
72	-		76		
75	DTACK	CSD	 27		
	755	NOR/			

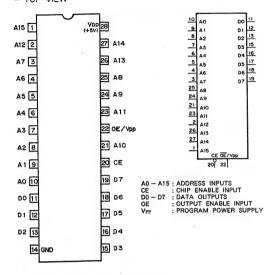
V00= + 5.0 V



GND 14,29,44,62,84,98 V00(+5V) 10,35,61,90

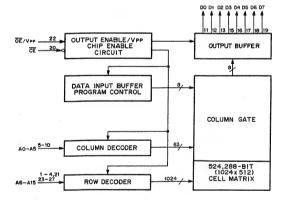
BVE-2000

TMS27C512-15JL (TI) C-MOS 512K (65,536x8 = 524,288)-BIT ERASABLE PROM - TOP VIEW -



An	CE	OE/VPP	VDD	Dn	FUNCTION
AIN	0	0	+5V	Dout	READ
AIN	0	1	+5V	HI-Z	OUTPUT DISABLE
Х	1	X	+5V	HI-Z	STANDBY
AIN	0	+12.5V	+6V	DEN	PGM
AIN	0	0	+6V	Dour	PGM VERIFY
X	1	+12.5V	+6V	HI-Z	PGM INH

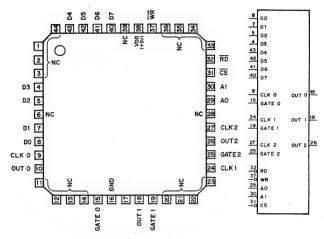
0 : LOW LEVEL 1 : HIGH LEVEL X: DON'T CARE HI-Z : HIGH IMPEDANCE

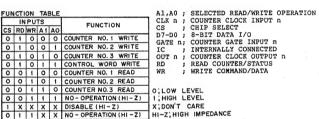


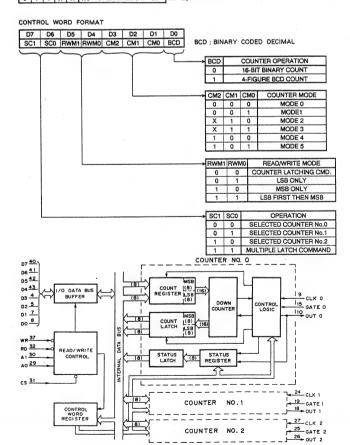
UPC393C (NEC) DUAL VOLTAGE COMPARATORS TOP VIEW -



UPD71054GB-10-3B4 (NEC) FLAT PACKAGE C-MOS PROGRAMMABLE TIMER COUNTER TOP VIEW -

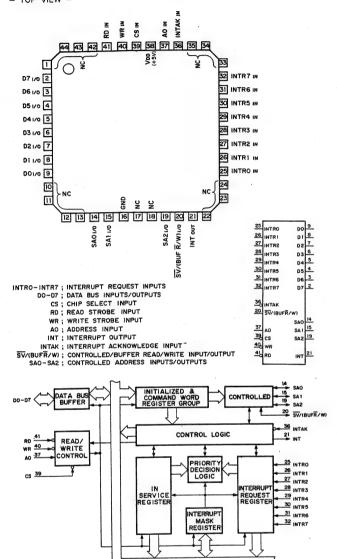




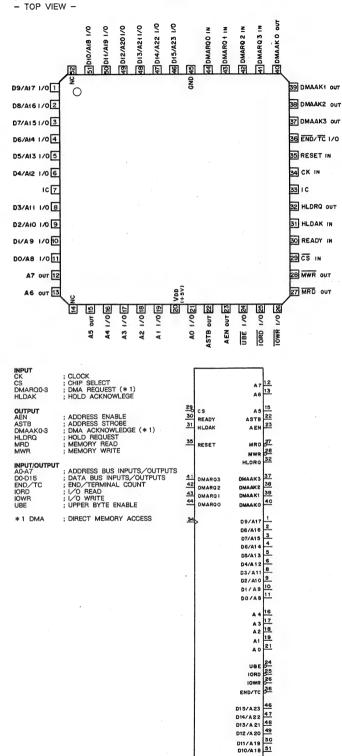


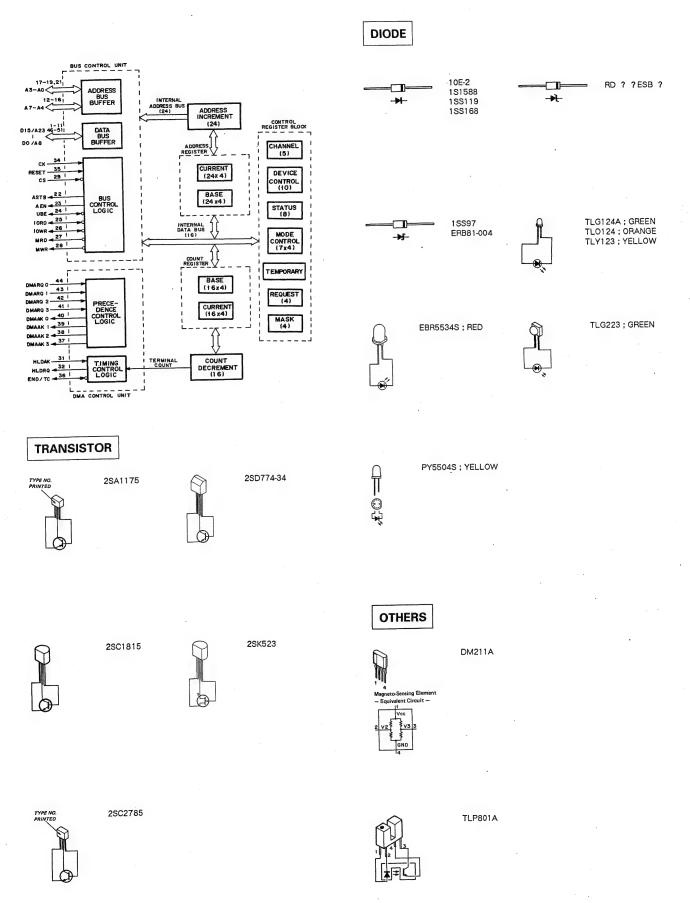
COUNTER NO. 2

UPD71059GB-10-3B4 (NEC) FLAT PACKAGE C-MOS INTERRUPT CONTROL UNIT - TOP VIEW -



UPD71071GC3B6 (NEC) FLAT PACKAGE
C-MOS DIRECT MEMORY ACCESS CONTROLLER
- TOP VIEW -





SECTION 5 SPARE PARTS & OPTIONAL FIXTURES

5-1. NOTES ON SPARE PARTS

(1) Safety Related Components Warning

Components marked with Λ on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation.

Replace these components with Sony parts whose part numbers appear in this manual or in service bulletins and service manual supplements published by Sony.

(2) Standardization of Parts

Spare parts supplied from Sony Parts Center may not always be identical with the parts actually in use due to accommodating the improved parts and/or engineering changes or standardization of genuine parts.

This manual's exploded views and electrical spare parts list indicate the part numbers of the standardized genuine parts at present.

(3) Stock of Part

Parts marked with "o" in the SP(Supply code)column of the spare parts list are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional time for delivery.

(4) Units for Capacitors, Inductors and resistors

The following units may be assumed in schmatic diagrams, electrical parts list and exploded views unless otherwise specified.

Capacitor: μ F Inductor: μ H Resistor: Ω

補修用部品注意事項

(1) 安全重要部品

回路図、分解図、電気部品表中、⚠印の部品は安全性を 維持するために重要な部品です。従ってこれらの部品を 交換するときには必ず指定の部品と交換してください。

(2) 部品の共通化

ソニーから供給される部品はセットに実装されているものと異なることがあります。これは部品の共通化、改良等によるものです。

分解図や電気部品表には現時点での共通化された部品が 記載されています。

(3) 部品の在庫

部品表のSP(Supply code)欄にOで示される部品は交換頻度が低い部品ですので在庫していないことがあり、納期が長くなることがあります。

(4) コンデンサ、インダクター、抵抗の単位

回路図、分解図、電気部品表中、特に明記したものを除 き、下記の単位は省略されています。

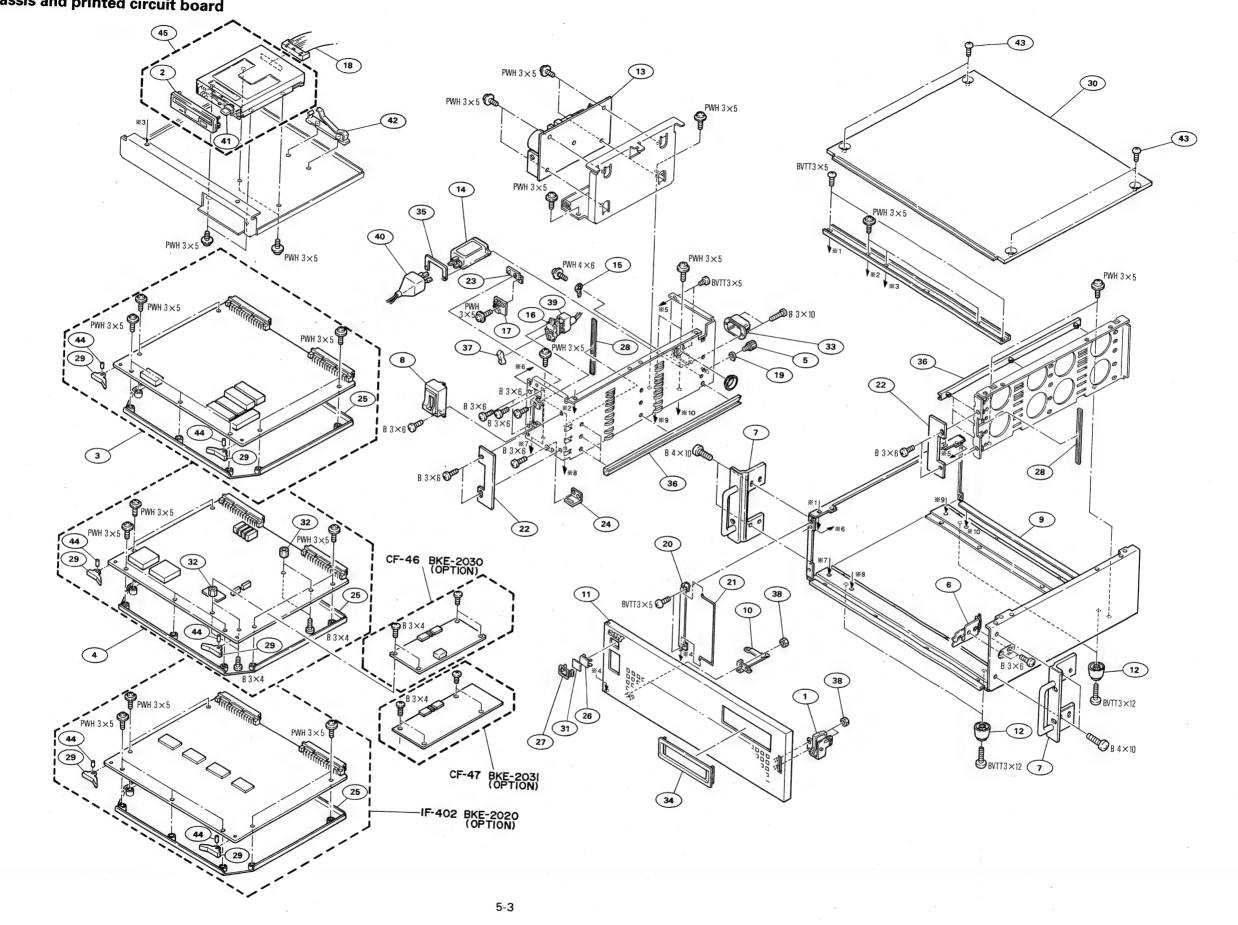
コンデンサ: μF インダクタ: μH 抵抗 : Ω

5-2. EXPLODED VIEWS

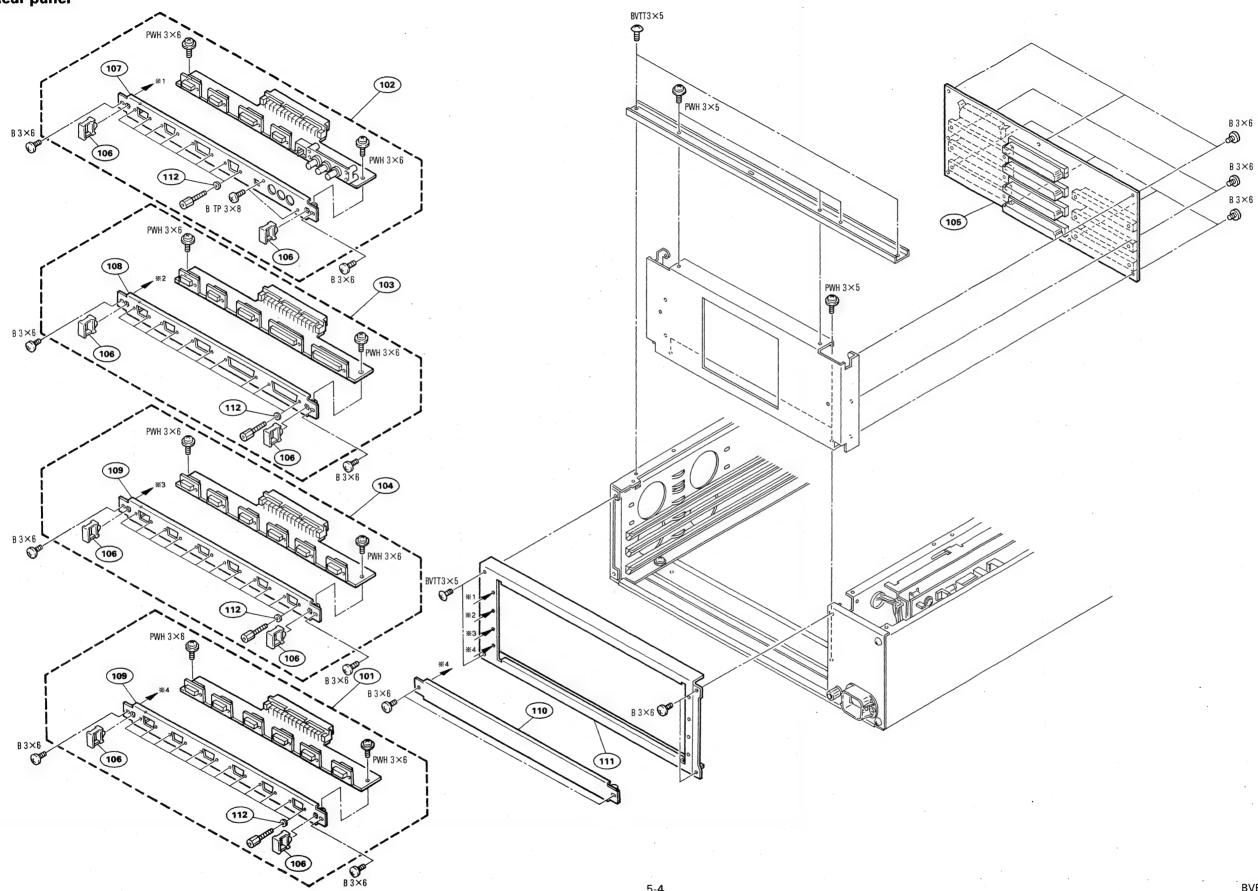
BVE-2000	CHASSIS AND PRINTED CIRCUIT BOARD
No.	Part No. SP Description
1	A-6279-484-D o HANDLE ASSY, DOOR
2	A-8030-646-A s PANEL ASSY, FRONT (FD DRIVE)
3	A-8271-804-A o MOUNTED CIRCUIT BOARD, SY-184
4	A-8271-805-A o MOUNTED CIRCUIT BOARD, IF-391
5	X-2068-004-1 s TERMINAL ASSY
6	X-2127-216-1 o LOCK ASSY, DOOR
7	X-2127-218-3 o ANGLE (3U) ASSY, RACK
8	X-2127-224-1 s BRACKET ASSY, SW
9	X-2127-229-1 o CHASSIS ASSY, 3U
10	X-2182-907-3 s STOPPER ASSY
11	X-3166-965-1 o PANEL ASSY, FRONT
12	X-3566-109-0 s FOOT ASSY, MF
13 A	1-413-647-11 s SWITCHING REGULATOR
14 A	1-526-813-31 s INLET, AC 3P
15	1-535-316-11 s TERMINAL, GROUND (M4)
16 A	1-570-117-41 s SWITCH, SEESAW (AC POWER)
17	1-620-338-11 s PRINTED CIRCUIT BOARD, LE-55
18	1-951-204-12 o HARNESS, SUB(FDCC)
19	2-068-008-00 s WASHER
20	2-139-012-01 o HINGE (3U)
21	2-139-020-01 o SHAFT (3U), HINGE
22	2-139-069-01 o RETAINER, PC BOARD
23	2-139-108-01 o BRACKET, LED
24	2-139-109-01 o TABEL (R), STOPPER
25	2-139-140-01 o PLATE, SHIELD
26	2-139-192-01 o FRAME, INDICATOR WINDOW
27	2-139-193-01 o WINDOW, INDICATOR
28	2-139-217-01 o RETAINÉR (3U)
29	2-182-909-01 o LEVER, PC BOÁRD
30	2-182-935-01 o PLATE (D350),TOP
31	2-249-353-00 o COVER, LAMP
32	2-280-622-01 o SUPPORT (M3), HEXAGON
33	2-990-241-02 s HOLDER (Å), PLUG
34	3-179-257-01 o ESCUTCHEON, FD
35	3-625-620-00 s BRACKET, AC CONNECTOR
36	3-673-676-41 o RAIL, GUIDE, PC BOARD
37	3-688-814-01 s CAP, SWITCH
38	4-334-513-00 s NUT, NYLON
39	4-378-341-01 o COVER, SWITCH
40	4-601-466-11 o COVER, 3P INLET
41	4-613-121-45 s BUTTON, EJECT
42	4-874-187-01 o CLIP, CABLE
43	4-886-821-11 s SCREW, M3 CASE
44	7-626-320-11 s PIN, SPRING 3X8
45	8-422-372-70 o MP-F17W-L5/2 (FD DRIVE UNIT)

5-2 BVE-2000

BVE-2000 Chassis and printed circuit board



BVE-2000 Rear panel



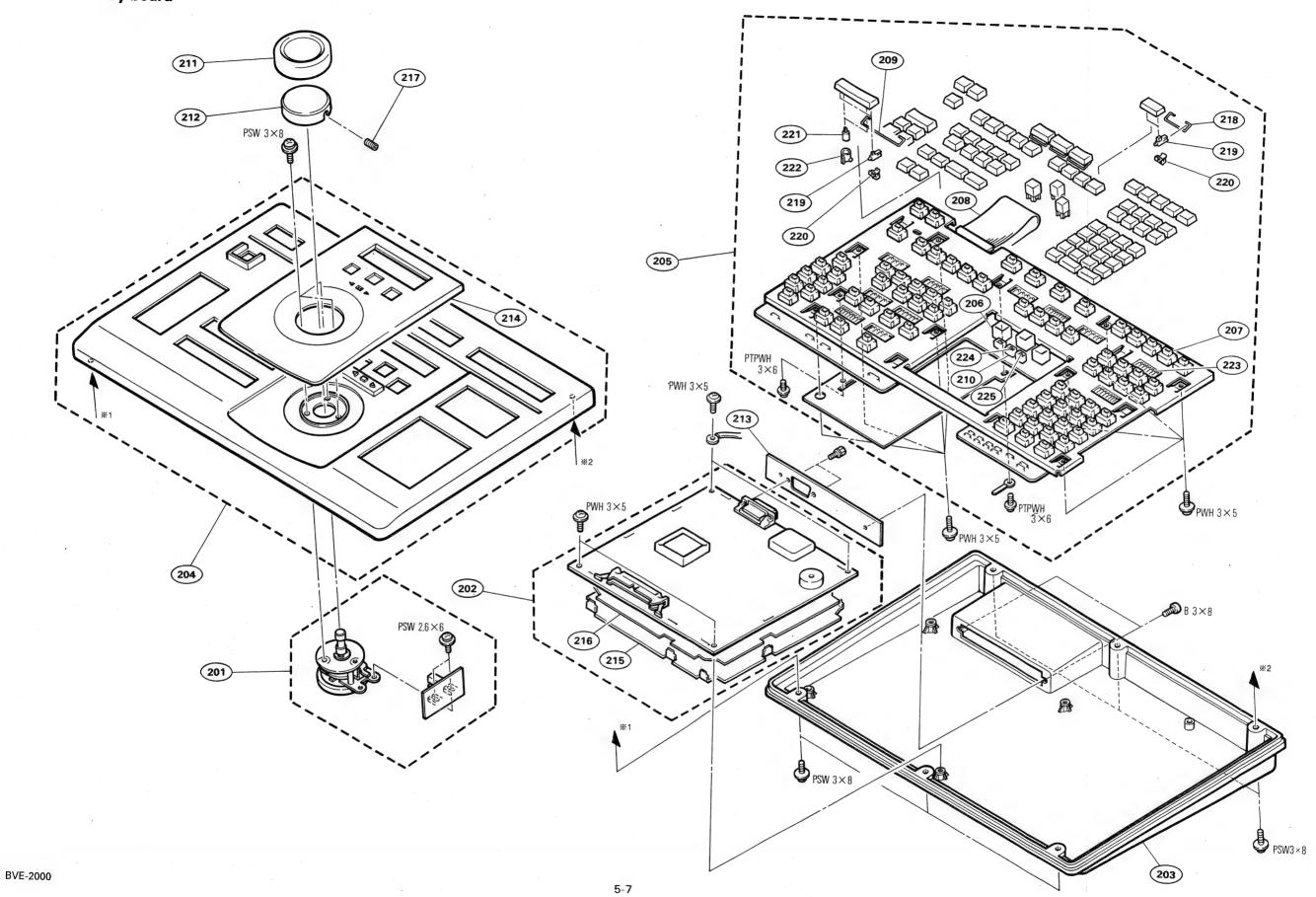
BVE-2000 REAR PANEL

2.2 00	00 111111111111111111111111111111111111	
No.	Part No. SP	Description
101 102 103 104 105	A-8267-085-A o A-8267-086-A o A-8267-087-A o	CN-786 ASSY
106 107 108 109 110	3-179-255-01 o	HANDLE PANEL (1), CONNECTOR PANEL (2), CONNECTOR PANEL (3,4), CONNECTOR PANEL (BLANK), CONNECTOR
111 112	3-179-265-01 o 7-688-002-03 s	PANEL, REAR W 2.6, SMALL

BKE-20	10 KEY BOARD	
No.	Part No. SP	Description
202 203 204	A-8267-138-A 0 A-8271-803-A 0 X-3166-919-1 0 X-3166-934-1 0 1-466-956-11 0	MOUNTED CIRCUIT BOARD, CPU-132 PANEL ASSY, BASE PANEL ASSY, KEY
206 207 208 209 210	1-571-167-11 s 1-571-505-11 s 1-951-235-11 o 2-114-404-01 o 2-114-405-01 o	SWITCH, TACTIL SWITCH, KEY BOARD (WITH LED) HARNESS, SUB(KYFLAT) LINK HOLDER, LED
211 212 213 214 215	3-179-110-01 s 3-179-185-01 o 3-179-186-01 o 3-179-224-01 o 3-180-014-01 o	COVER, DIAL DIAL, SERCH PLATE, CONNECTOR PAD, KEY PLATE, SHIELD
219	4-000-034-04 8	SHEET, INSULATED SET SCREW, DOUBLE POINT 4X4 LINK BOSS (UPPER), LINK BOSS (LOWER), LINK
223 224	4-605-537-01 s 4-605-538-01 s 8-719-820-59 s 8-719-921-01 s 8-719-955-04 s	CASE, GUIDE DIODE 1S1588 DIODE EBR5534S

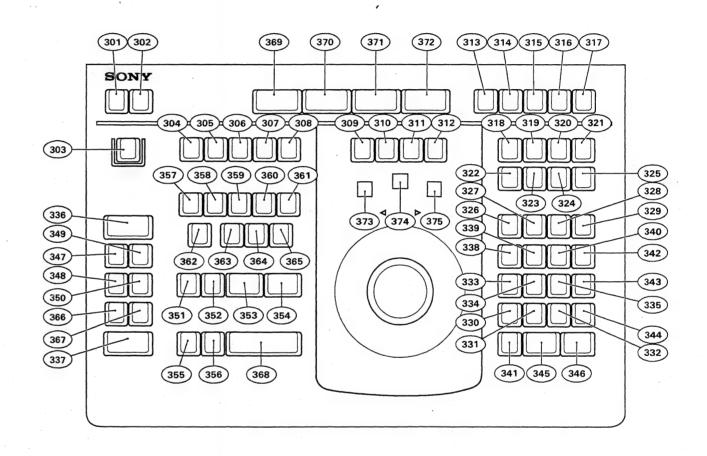
BVE-2000

BKE-2010 Key board



BKE-2010 Key top

BKE-20	10 KEY TOP			
No.	Part No. SP Description	No.	Part No.	SP Description
301 302 303 304 305	3-179-173-01 O KEY TOP (G1-1) 3-179-173-11 O KEY TOP (G1-1) 3-179-173-21 O KEY TOP (G1-1) 3-179-173-31 O KEY TOP (G1-1) 3-179-173-41 O KEY TOP (G1-1)	356 357 358 359 360	3-179-188-0 3-179-188-1 3-179-188-2	11 0 KEY TOP (G1-8) 11 0 KEY TOP (G1LED-1 11 0 KEY TOP (G1LED-1 21 0 KEY TOP (G1LED-1 13 0 KEY TOP (G1LED-1
306 307 308 309 310	3-179-173-51 O KEY TOP (G1-1) 3-179-173-61 O KEY TOP (G1-1) 3-179-173-71 O KEY TOP (G1-1) 3-179-174-01 O KEY TOP (G1-2) 3-179-174-11 O KEY TOP (G1-2)	361 362 363 364 365	3-179-188-5 3-179-188-6 3-179-188-7	1 o KEY TOP (G1LED-1 1 o KEY TOP (G1LED-1 1 o KEY TOP (G1LED-1 1 o KEY TOP (G1LED-1 1 o KEY TOP (G1LED-1
311 312 313 314 315	3-179-174-21 O KEY TOP (G1-2) 3-179-174-31 O KEY TOP (G1-2) 3-179-174-41 O KEY TOP (G1-2) 3-179-174-51 O KEY TOP (G1-2) 3-179-174-61 O KEY TOP (G1-2)	366 367 368 369 370	3-179-189-1 3-179-191-0 3-179-192-0	1 o KEY TOP (G1LED-2 1 o KEY TOP (G1LED-2 1 o KEY TOP (G3) 1 o KEY TOP (G2-3) 1 o KEY TOP (G2-3)
316 317 318 319 320	3-179-174-71 O KEY TOP (G1-2) 3-179-174-81 O KEY TOP (G1-2) 3-179-175-01 O KEY TOP (G1-3) 3-179-175-11 O KEY TOP (G1-3) 3-179-175-21 O KEY TOP (G1-3)	371 372 373 374 375	3-179-192-3 3-179-193-0 3-179-193-1	1 0 KEY TOP (G2-3) 1 0 KEY TOP (G2-3) 1 0 KEY TOP (SQUARE 6) 1 0 KEY TOP (SQUARE 6) 1 0 KEY TOP (SQUARE 6)
321 322 323 324 325	3-179-175-31 O KEY TOP (G1-3) 3-179-175-41 O KEY TOP (G1-3) 3-179-175-51 O KEY TOP (G1-3) 3-179-175-61 O KEY TOP (G1-3) 3-179-175-71 O KEY TOP (G1-3)			
326 327 328 329 330	3-179-176-01 O KEY TOP (G1-4) 3-179-176-11 O KEY TOP (G1-4) 3-179-176-21 O KEY TOP (G1-4) 3-179-176-31 O KEY TOP (G1-4) 3-179-176-41 O KEY TOP (G1-4)			
331 332 333 334 335	3-179-176-51 O KEY TOP (G1-4) 3-179-176-61 O KEY TOP (G1-4) 3-179-176-71 O KEY TOP (G1-4) 3-179-176-81 O KEY TOP (G1-4) 3-179-176-91 O KEY TOP (G1-4)			
336 337 338 339 340	3-179-177-01 O KEY TOP (G2-1) 3-179-178-01 O KEY TOP (G2-2) 3-179-179-01 O KEY TOP (G1-5) 3-179-179-11 O KEY TOP (G1-5) 3-179-179-21 O KEY TOP (G1-5)			
341 342 343 344 345	3-179-179-31 o KEY TOP (G1-5) 3-179-179-41 o KEY TOP (G1-5) 3-179-179-51 o KEY TOP (G1-5) 3-179-179-61 o KEY TOP (G1-5) 3-179-180-01 o KEY TOP (G1.5-1)			
346 347 348 349 350	3-179-180-11 o KEY TOP (G1.5-1) 3-179-181-01 o KEY TOP (G1-6) 3-179-181-11 o KEY TOP (G1-6) 3-179-181-21 o KEY TOP (G1-6) 3-179-181-31 o KEY TOP (G1-6)			
351 352 353 354 355	3-179-182-01 o KEY TOP (G1-7) 3-179-182-11 o KEY TOP (G1-7) 3-179-183-01 o KEY TOP (G1.5-2) 3-179-183-11 o KEY TOP (G1.5-2) 3-179-184-01 o KEY TOP (G1-8)			



5-3. ELECTRICAL PARTS LIST

CAPACITOR (MICA)

Part No. SP Description 1-107-210-00 s MICA 22pF 5% 500V

RESISTOR (METAL)

Part No. SP Description

1-216-627-11 s METAL, CHIP 100 1% 1/10W 1-216-644-11 s METAL, CHIP 510 1% 1/10W 1-216-651-11 s METAL, CHIP 1.0k 1% 1/10W 1-216-659-11 s METAL, CHIP 2.2k 1% 1/10W 1-216-667-11 s METAL, CHIP 4.7k 1% 1/10W 1-216-692-11 s METAL, CHIP 51k 1% 1/10W 1-216-692-11 s METAL, CHIP 51k 1% 1/10W

CF-46 BOARD used for BKE-2030 (CF-46 BOARD used for BKE-2030)				
Ref. No.	Part No. SP Description	Ref. No. or Q'ty	Part No. SP Description	
C1 C2 C3 C4 C5	1-126-412-11 S ELECT, CHIP 220uF 20% 4V 1-126-412-11 S ELECT, CHIP 220uF 20% 4V 1-126-396-11 S ELECT, CHIP 47uF 20% 16V 1-126-396-11 S ELECT, CHIP 47uF 20% 16V 1-126-401-11 S ELECT, CHIP 1UF 20% 50V	C59 C60 C61 C62 C63	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	
C6	1-126-401-11 s ELECT, CHIP 1uf 20% 50V	C64	1-163-016-00 s CERAMIC CHIP 0.0039uF 10% 50V	
C7 C8 C9 C10	1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-126-396-11 s ELECT, CHIP 47uF 20% 16V 1-126-394-11 s ELECT, CHIP 10uF 20% 16V	CN102 CN103 CN104	1-506-481-11 s CONNECTOR, 2P, MALE 1-506-487-11 s CONNECTOR 8P, MALE 1-506-487-11 s CONNECTOR 8P, MALE	
C11 C12 C13 C14	1-126-401-11 S ELECT, CHIP 1uF 20% 50V 1-126-394-11 S ELECT, CHIP 10uF 20% 16V 1-126-394-11 S ELECT, CHIP 10uF 20% 16V 1-126-396-11 S ELECT, CHIP 47uF 20% 16V 1-126-394-11 S ELECT, CHIP 10uF 20% 16V 1-126-394-11 S ELECT, CHIP 10uF 20% 16V 1-126-395-11 S ELECT 22uF 20% 16V 1-126-392-11 S ELECT, CHIP 100uF 20% 6.3V 1-126-392-11 S ELECT, CHIP 100uF 20% 6.3V	COP2 COP4 COP6 COP8	1-562-579-11 s PLUG, SHORTING 1-562-579-11 s PLUG, SHORTING 1-562-579-11 s PLUG, SHORTING 1-562-579-11 s PLUG, SHORTING	
C15 C16	1-126-391-11 s ELECT, CHIP 47uF 20% 6.3V 1-126-394-11 s ELECT, CHIP 10uF 20% 16V	COR1 COR2 COR3	1-564-952-21 s PIN, DIL 16P 1-564-952-21 s PIN, DIL 16P 1-564-952-21 s PIN, DIL 16P	
C17 C18 C19	1-126-392-11 S ELECT, CHIP 100UF 20% 6.3V 1-126-392-11 S FIECT, CHIP 100UF 20% 6.3V	COR5	1-564-952-21 s PIN, DIL 16P 1-564-952-21 s PIN, DIL 16P	
C20 C21	1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-135-137-11 s TANTALUM 6.8uF 20% 25V	COR6 COR7 COR8	1-564-952-21 s PIN, DIL 16P 1-564-952-21 s PIN, DIL 16P 1-564-952-21 s PIN, DIL 16P	
C22 C23 C24 C25	1-126-394-11 S ELECT, CHIP 10UF 20% 16V 1-162-901-11 S CERAMIC 0.1uF 10% 50V 1-162-901-11 S CERAMIC 0.1uF 10% 50V 1-126-397-11 S ELECT, CHIP 33uF 20% 25V	D1 D2 D3 D4	8-719-812-43 s LED TLG124A, GRN 8-719-800-99 s LED TLG223, GREEN 8-719-911-19 s DIODE 1SS119 8-719-911-19 s DIODE 1SS119	
C26 C27 C28 C29 C30	1-126-391-11 S ELECT, CHIP 47uF 20% 6.3V 1-126-391-11 S ELECT, CHIP 10uF 20% 16V 1-126-392-11 S ELECT, CHIP 10uF 20% 6.3V 1-126-394-11 S ELECT, CHIP 10uF 20% 16V 1-135-137-11 S TANTALUM 6.8uF 20% 25V 1-126-394-11 S ELECT, CHIP 10uF 20% 16V 1-162-901-11 S CERAMIC 0.1uF 10% 50V 1-162-901-11 S CERAMIC 0.1uF 10% 50V 1-126-397-11 S ELECT, CHIP 33uF 20% 25V 1-126-397-11 S ELECT, CHIP 33uF 20% 25V 1-126-392-11 S ELECT, CHIP 33uF 20% 25V 1-163-809-11 S CERAMIC, CHIP 100uF 20% 6.3V 1-163-809-11 S CERAMIC, CHIP 0.047uF 10% 25V 1-163-037-11 S CERAMIC, CHIP 0.047uF 10% 25V 1-163-037-11 S CERAMIC, CHIP 0.047uF 10% 25V 1-163-037-11 S CERAMIC, CHIP 0.022uF 10% 25V 1-163-037-11 S CERAMIC, CHIP 0.022uF 10% 25V 1-109-621-00 S MICA 20PF 1% 500V	D5 D6 D7 D8	8-719-101-98 s DIODE 1SS97-0 8-719-109-97 s DIODE RD6.8EB1 8-719-903-27 s DIODE 1SS168 8-719-903-27 s DIODE 1SS168	
C31 C32	1-163-809-11 s CERAMIC, CHIP 0.047uF 10% 25V 1-163-037-11 s CERAMIC, CHIP 0.022uF 10% 25V	D9 DL1	8-719-109-97 s DIODE RD6.8EB1 8-749-922-07 s IC DS1005-100	
C33 C34 C35	1-109-621-00 s MICA 220PF 1% 500V 1-107-202-00 s MICA 10PF 5% 500V 1-163-117-00 s CERAMIC, CHIP 100PF 5% 50V	IC1 IC2 IC3	8-759-906-53 s IC TL062CPS 8-759-978-96 s IC SN75207BNS 8-749-900-63 s IC BX365AL	
C36 C37 C38	1-163-133-00 s CERAMIC, CHIP 470PF 5% 50V 1-163-133-00 s CERAMIC, CHIP 470PF 5% 50V 1-162-901-11 s CERAMIC 0.1uF 10% 50V	IC4 IC5	8-759-908-17 s IC TL082CPS 8-759-239-58 s IC TC74HC221AF	
C39 C40	1-162-901-11 s CERAMIC 0.1uF 10% 50V 1-162-901-11 s CERAMIC 0.1uF 10% 50V	IC6 IC7 IC8	8-759-908-17 s IC TL082CPS 8-759-941-27 s IC MB4002PF 8-759-925-90 s IC SN74HC74NS	
C41 C42 C43	1-162-901-11 s CERAMIC 0.1uF 10% 50V 1-163-275-11 s CERAMIC, CHIP 0.001uF 5% 50V 1-163-016-00 s CERAMIC CHIP 0.0039uF 10% 50V	IC9 IC10 IC11	8-759-925-80 s IC SN74HC14NS 8-752-335-47 s IC CXD1216M 8-752-332-67 s IC CXD1217M	
C44 C45	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-163-037-11 s CERAMIC, CHIP 0.022uF 10% 25V	IC12 IC13	8-759-906-53 s IC TL062CPS 8-759-926-02 s IC SN74HC112NS	
C46 C47 C48	1-163-037-11 s CERAMIC, CHIP 0.022uF 10% 25V 1-109-621-00 s MICA 220PF 1% 500V 1-107-208-00 s MICA 18PF 5% 500V	IC14 IC15	8-759-239-23 s IC TC74HC86AF 8-759-902-88 s IC SN74LS123NS	
C49 C50	1-107-163-00 s MICA 47PF 5% 500V 1-163-037-11 s CERAMIC, CHIP 0.022UF 10% 25V	IC16 IC17 IC18	8-759-906-53 s IC TL062CPS 8-759-926-21 s IC SN74HC161NS 8-759-926-77 s IC SN74HC541NS 8-759-925-90 s IC SN74HC74NS	
C51 C52 C53 C54	1-163-133-00 s CERAMIC, CHIP 470PF 5% 50V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	IC19 IC20 L1	8-759-929-77 s IC SN74LS03NS 1-408-425-00 s INDUCTOR 220uH	
C55	1-163-117-00 s CERAMIC, CHIP 100PF 5% 50V	L2 L3	1-408-425-00 s INDUCTOR 220uH 1-408-409-00 s INDUCTOR 10uH	
C56 C57 C58	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	Q1 Q2	8-729-119-78 s TRANSISTOR 2SC2785-HFE 8-729-105-73 s TRANSISTOR 2SK523-L2	

(CF-46 BOARD used for BKE-2030) CF-47 BOARD used for BKE-2031 Ref. No. or Q'ty Part No. Ref. No. or Q'ty Part No. SP Description SP Description 8-729-105-73 s TRANSISTOR 2SK523-L2 8-729-105-73 s TRANSISTOR 2SK523-L2 8-729-119-78 s TRANSISTOR 2SC2785-HFE 1-126-401-11 s ELECT, CHIP 1uF 20% 50V 1-163-133-00 s CERAMIC, CHIP 470PF 5% 50V 1-126-392-11 s ELECT, CHIP 100uF 20% 6.3V 1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-162-901-11 s CERAMIC 0.1uF 10% 50V C17 8-729-105-73 s TRANSISTOR 2SK523-L2 C18 C19 1-216-669-11 s METAL, CHIP 5.6K 0.5% 1/10W 1-218-776-11 s METAL, CHIP 1M 0.5% 1/10W 1-216-693-11 s METAL, CHIP 56K 0.5% 1/10W 1-216-691-11 s METAL, CHIP 47K 0.5% 1/10W 1-216-624-11 s METAL, CHIP 75 0.5% 1/10W C20 R5 1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-107-163-00 s MICA 47PF 5% 500V 1-163-263-11 s CERAMIC, CHIP 330PF 5% 50V 1-162-901-11 s CERAMIC 0.1uF 10% 50V 1-162-901-11 s CERAMIC 0.1uF 10% 50V C22 C23 R7 **R8** C29 1-216-697-11 s METAL, CHIP 82K 0.5% 1/10W 1-216-643-11 s METAL, CHIP 470 0.5% 1/10W 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W 1-216-620-11 s METAL, CHIP 51 0.5% 1/10W 1-216-645-11 s METAL, CHIP 560 0.5% 1/10W C30 R9 R12 1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-163-037-11 s CERAMIC, CHIP 0.022uF 10% 25V 1-163-037-11 s CERAMIC, CHIP 0.022uF 10% 25V 1-126-401-11 s ELECT, CHIP 1uF 20% 50V 1-126-401-11 s ELECT, CHIP 1uF 20% 50V R13 C32 C33 R14 R15 C34 1-216-645-11 s METAL, CHIP 560 0.5% 1/10W 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W 1-216-679-11 s METAL, CHIP 15K 0.5% 1/10W 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W 1-216-679-11 s METAL, CHIP 15K 0.5% 1/10W C35 R16 R17 1-163-251-11 s CERAMIC, CHIP 100PF 5% 50V 1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-109-621-00 s MICA 220PF 1% 500V 1-163-275-11 s CERAMIC, CHIP 0.001uF 5% 50V 1-164-232-11 s CERAMIC 0.01uF 10% 100V R24 C37 R25 C38 C39 1-216-685-11 s METAL, CHIP 27K 0.5% 1/10W 1-216-645-11 s METAL, CHIP 560 0.5% 1/10W 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W 1-216-685-11 s METAL, CHIP 27K 0.5% 1/10W 1-216-624-11 s METAL, CHIP 75 0.5% 1/10W R27 R28 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-126-401-11 s ELECT, CHIP 1uF 20% 50V 1-163-133-00 s CERAMIC, CHIP 470PF 5% 50V 1-163-133-00 s CERAMIC, CHIP 470PF 5% 50V 1-163-037-11 s CERAMIC, CHIP 0.022uF 10% 25V R29 C42 C43 C44 R30 R32 1-216-624-11 s METAL, CHIP 75 0.5% 1/10W 1-216-681-11 s METAL, CHIP 18K 0.5% 1/10W 1-216-669-11 s METAL, CHIP 5.6K 0.5% 1/10W 1-216-685-11 s METAL, CHIP 27K 0.5% 1/10W 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W R34 C45 R38 1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-126-396-11 s ELECT, CHIP 47uF 20% 16V 1-126-401-11 s ELECT, CHIP 1uF 20% 50V 1-126-392-11 s ELECT, CHIP 100uF 20% 6.3V 1-163-137-00 s CERAMIC, CHIP 680PF 5% 50V R42 R45 C47 C48 C49 R49 1-216-695-11 s METAL, CHIP 68K 0.5% 1/10W 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W 1-218-776-11 s METAL, CHIP 1M 0.5% 1/10W 1-216-660-11 s METAL, CHIP 2.4K 0.5% 1/10W C50 R53 1-163-251-11 s CERAMIC, CHIP 100PF 5% 50V 1-163-809-11 s CERAMIC, CHIP 0.047uF 10% 25V 1-126-396-11 s ELECT, CHIP 47uF 20% 16V 1-126-396-11 s ELECT, CHIP 47uF 20% 16V 1-163-037-11 s CERAMIC, CHIP 0.022uF 10% 25V R55 C52 R56 C53 R57 C54 1-216-674-11 s METAL, CHIP 9.1K 0.5% 1/10W 1-216-671-11 s METAL, CHIP 6.8K 0.5% 1/10W 1-216-674-11 s METAL, CHIP 9.1K 0.5% 1/10W 1-216-671-11 s METAL, CHIP 6.8K 0.5% 1/10W 1-216-684-11 s METAL, CHIP 24K 0.5% 1/10W C56 R62 R63 1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-126-401-11 s ELECT, CHIP 1uF 20% 50V 1-163-809-11 s CERAMIC, CHIP 0.047uF 10% 25V 1-107-209-00 s MICA 20PF 5% 500V R64 R65 C58 C59 C60 1-216-682-11 s METAL, CHIP 20K 0.5% 1/10W 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W R71 C61 R73 1-126-392-11 s ELECT, CHIP 100uF 20% 6.3V 1-163-037-11 s CERAMIC, CHIP 0.022uF 10% 25V 1-126-412-11 s ELECT, CHIP 220uF 20% 4V 1-126-412-11 s ELECT, CHIP 220uF 20% 4V 1-107-208-00 s MICA 18PF 5% 500V RB1 1-231-411-00 s RESISTOR BLOCK 100Kx8 C63 C64 1-237-514-21 s RES, ADJ METAL 500 1-237-515-21 s RES, ADJ METAL 1K 1-237-504-21 s RES, ADJ METAL 20K C65 C66 RV2 1-126-397-11 s ELECT, CHIP 33uF 20% 25V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-126-397-11 s ELECT, CHIP 33uF 20% 25V 1-164-232-11 s CERAMIC 0.01uF 10% 100V C100 S1 1-553-906-00 s SWITCH, SLIDE C101 C102 1-577-089-11 s VCO, CRYSTAL 14.318180MHz C103 X1 C104 1-126-392-11 s ELECT, CHIP 100uF 20% 6.3V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-107-202-00 s MICA 10PF 5% 500V C105 C110 1-506-481-11 s CONNECTOR, 2P, MALE 1-506-487-11 s CONNECTOR 8P, MALE 1-506-487-11 s CONNECTOR 8P, MALE CN103 CN104 CP3 1-231-411-00 s RESISTOR BLOCK 100Kx8

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(CF-47 BOARD used for BKE-2031)
 (CF-47 BOARD used for BKE-2031)
Ref. No. or Q'ty Part No.
                                                                                                                                                                                  Ref. No.
                                                                                                                                                                                  or Q'ty Part No.
                                                             SP Description
                                                                                                                                                                                                                                           SP Description
                                                                                                                                                                                                          1-216-645-11 s METAL, CHIP 560 0.5% 1/10W 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W 1-218-776-11 s METAL, CHIP 1M 0.5% 1/10W
                         8-719-800-99 s LED TLG223, GREEN
8-719-812-43 s LED TLG124A, GRN
8-719-911-19 s DIODE 1SS119
8-719-911-19 s DIODE 1SS119
                                                                                                                                                                                  R45
\bar{D}\bar{2}
                                                                                                                                                                                  R46
 D3
                                                                                                                                                                                  R48
 D4
                                                                                                                                                                                  R49
                          8-719-911-19 s DIODE 1SS119
 D5
                                                                                                                                                                                                          1-218-776-11 s METAL, CHIP 1M 0.5% 1/10W 1-216-687-11 s METAL, CHIP 33K 0.5% 1/10W 1-216-679-11 s METAL, CHIP 15K 0.5% 1/10W 1-216-685-11 s METAL, CHIP 27K 0.5% 1/10W 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W
                          8-719-109-97 s DIODE RD6.8EB1
                                                                                                                                                                                  R54
 D7
                                                                                                                                                                                  R55
                          8-749-922-07 s IC DS1005-100
                                                                                                                                                                                  R56
 DL1
                                                                                                                                                                                  R58
                          1-527-497-00 s FILTER, CERAMIC 4.55MHz
                                                                                                                                                                                  R59
 FL1
                          8-759-926-77 s IC SN74HC541NS
8-759-925-79 s IC SN74HC11ANS
8-759-929-77 s IC SN74LS03NS
8-759-907-81 s IC SN74LS221NS
8-759-926-21 s IC SN74HC161NS
                                                                                                                                                                                                          1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W 1-216-679-11 s METAL, CHIP 15K 0.5% 1/10W 1-216-695-11 s METAL, CHIP 68K 0.5% 1/10W 1-216-661-11 s METAL, CHIP 2.7K 0.5% 1/10W 1-216-697-11 s METAL, CHIP 82K 0.5% 1/10W
 IC5
                                                                                                                                                                                  R61
  IC7
                                                                                                                                                                                  R62
  IC8
  IC10
                                                                                                                                                                                  R65
                                                                                                                                                                                  R66
  IC11
                          8-759-926-50 s IC SN74HC251ANS
8-759-902-88 s IC SN74LS123NS
8-759-925-90 s IC SN74HC74NS
8-759-925-74 s IC TC74HC04NS
8-759-925-90 s IC SN74HC74NS
                                                                                                                                                                                                         1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W 1-216-624-11 s METAL, CHIP 75 0.5% 1/10W 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W 1-216-693-11 s METAL, CHIP 26K 0.5% 1/10W
                                                                                                                                                                                  R67
                                                                                                                                                                                  R73
  IC13
IC15
                                                                                                                                                                                  R74
                                                                                                                                                                                  R76
   IC16
                                                                                                                                                                                  R80
   IC17
                          8-759-906-53 s IC TL062CPS
8-759-239-23 s IC TC74HC86AF
8-759-925-90 s IC SN74HC74NS
8-759-925-90 s IC SN74HC74NS
8-759-925-90 s IC SN74HC74NS
                                                                                                                                                                                                          1-216-691-11 s METAL, CHIP 47K 0.5% 1/10W 1-216-624-11 s METAL, CHIP 75 0.5% 1/10W 1-216-669-11 s METAL, CHIP 5.6K 0.5% 1/10W 1-216-624-11 s METAL, CHIP 75 0.5% 1/10W 1-216-671-11 s METAL, CHIP 6.8K 0.5% 1/10W
                                                                                                                                                                                  R81
  IC18
                                                                                                                                                                                  R82
  IC19
                                                                                                                                                                                  R83
   IC20
                                                                                                                                                                                  R85
   IC21
                                                                                                                                                                                  Ran
   IC22
                          8-759-978-96 s IC SN75207BNS
8-759-978-96 s IC SN75207BNS
8-752-332-67 s IC CXD1217M
8-759-906-53 s IC TL062CPS
8-759-908-17 s IC TL082CPS
                                                                                                                                                                                                          1-216-674-11 s METAL, CHIP 9.1K 0.5% 1/10W 1-216-674-11 s METAL, CHIP 9.1K 0.5% 1/10W 1-216-671-11 s METAL, CHIP 6.8K 0.5% 1/10W 1-216-679-11 s METAL, CHIP 15K 0.5% 1/10W 1-218-776-11 s METAL, CHIP 1M 0.5% 1/10W
                                                                                                                                                                                   R91
   IC23
   IC24
                                                                                                                                                                                  R92
                                                                                                                                                                                  R93
   IC25
                                                                                                                                                                                  R100
   IC26
                                                                                                                                                                                  R101
   IC27
                          8-759-906-53 s IC TL062CPS
8-759-906-53 s IC TL062CPS
8-759-902-88 s IC SN74LS123NS
8-752-335-47 s IC CXD1216M
8-749-900-63 s IC BX365AL
                                                                                                                                                                                                          1-216-697-11 s METAL, CHIP 82K 0.5% 1/10W 1-216-697-11 s METAL, CHIP 82K 0.5% 1/10W
   IC28
                                                                                                                                                                                  R107
                                                                                                                                                                                  R108
   IC29
   IC30
                                                                                                                                                                                                          1-237-504-21 s RES, ADJ METAL 20K
1-237-514-21 s RES, ADJ METAL 500
1-237-518-21 s RES, ADJ METAL 10K
1-237-519-21 s RES, ADJ METAL 20K
                                                                                                                                                                                  RV1
   IC31
                                                                                                                                                                                  RV2
   IC32
                                                                                                                                                                                  RV3
RV4
                          1-408-425-00 s INDUCTOR 220uH
1-408-425-00 s INDUCTOR 220uH
1-408-409-00 s INDUCTOR 10uH
1-408-425-00 s INDUCTOR 220uH
   L2
  L3
L4
                                                                                                                                                                                  RV5
                                                                                                                                                                                                           1-237-515-21 s RES, ADJ METAL 1K
                                                                                                                                                                                                          1-553-906-00 s SWITCH, SLIDE
1-554-029-00 s SWITCH, SLIDE
   L5
                                                                                                                                                                                  S3
                           8-729-105-73 s TRANSISTOR 2SK523-L2
8-729-105-73 s TRANSISTOR 2SK523-L2
                                                                                                                                                                                                           1-577-295-11 s VCO, CRYSTAL 17.734475MHz
1-577-294-11 s VCO, CRYSTAL 14.187500MHz
                           8-729-105-73 s TRANSISTOR 2SK523-L2
8-729-119-78 s TRANSISTOR 2SC2785-HFE
                                                                                                                                                                                  X2
                           8-729-119-78 s TRANSISTOR 2SC2785-HFE
                          1-216-649-11 s METAL, CHIP 820 0.5% 1/10W 1-216-649-11 s METAL, CHIP 820 0.5% 1/10W 1-216-691-11 s METAL, CHIP 47K 0.5% 1/10W 1-216-115-00 s METAL, CHIP 560K 5% 1/10W 1-216-683-11 s METAL, CHIP 22K 0.5% 1/10W
   R6
   R7
   R8
   R9
   R10
                           1-216-684-11 s METAL, CHIP 24K 0.5% 1/10W 1-216-682-11 s METAL, CHIP 20K 0.5% 1/10W 1-216-653-11 s METAL, CHIP 1.2K 0.5% 1/10W 1-216-663-11 s METAL, CHIP 3.3K 0.5% 1/10W 1-216-645-11 s METAL, CHIP 560 0.5% 1/10W
   R16
   R17
  R23
   R24
   R28
                           1-216-691-11 s METAL, CHIP 47K 0.5% 1/10W 1-216-640-11 s METAL, CHIP 360 0.5% 1/10W 1-216-105-00 s METAL, CHIP 220K 5% 1/10W 1-216-645-11 s METAL, CHIP 560 0.5% 1/10W 1-216-685-11 s METAL, CHIP 27K 0.5% 1/10W
   R34
   R36
   R43
   R44
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CN-781 BOARD Ref. No. or Q'ty Part No. SP Description A-8267-085-A O CN-781 ASSY 3-172-089-01 O HANDLE 3-179-253-02 O PANEL (1), CONNECTOR 7-682-903-11 S SCREW +PWH 3X6 7-685-546-14 S SCREW +BTP 3X8 TYPE2 N-S 1pc 2pcs 1pc 10pcs 4pcs 1-566-318-11 s CONNECTOR, D-SUB 9P, MALE 1-566-318-11 s CONNECTOR, D-SUB 9P, MALE 1-563-771-11 s CONNECTOR, D-SUB 15P, FEMALE 1-563-770-11 s CONNECTOR, D-SUB 9P, FEMALE 1-691-431-21 s CONNECTOR, 3-BNC, FEMALE CN1 CN2 CN3 CN4 CN5 CN781 1-506-747-11 s CONNECTOR, DIN 64P, MALE 1-410-802-11 s INDUCTOR, CHIP 0.039uH 1-410-802-11 s INDUCTOR, CHIP 0.039uH 1-410-802-11 s INDUCTOR, CHIP 0.039uH L1 L2 L3 PS1 **1-532-686-00 s LINK, IC 2.7A 1-532-686-00 s LINK, IC 2.7A** 1-215-394-00 s METAL 75 1% 1/6W R1

1-570-707-11 s SWITCH, SLIDE

CN-786 BOARD

S1

Ref. No. or Q'ty	Part No. SP Description
2pcs 1pc 12pcs	A-8267-086-A o CN-786 ASSY 3-172-089-01 o HANDLE 3-179-254-02 o PANEL (2), CONNECTOR 7-682-903-11 s SCREW +PWH 3X6 7-685-546-14 s SCREW +BTP 3X8 TYPE2 N-S
CN2 CN3 CN4	1-563-770-11 s CONNECTOR, D-SUB 9P, FEMALE 1-563-770-11 s CONNECTOR, D-SUB 9P, FEMALE 1-563-771-11 s CONNECTOR, D-SUB 15P, FEMALE 1-563-772-11 o CONNECTOR, D-SUB 25P, FEMALE 1-563-772-11 o CONNECTOR, D-SUB 25P, FEMALE
CN786	1-506-747-11 s CONNECTOR, DIN 64P, MALE
S1 S2	1-554-029-00 s SWITCH, SLIDE 1-554-029-00 s SWITCH, SLIDE

CN-787 BOARD

Ref. No. or Q'ty	Part No. SP	Description
1pc 14pcs	7-682-903-11 s	HANDLE PANEL (3, 4), CONNECTOR
CN1 CN1 CN2 CN3 CN4	1-563-770-11 s 1-563-770-11 s 1-563-770-11 s	CONNECTOR 3P, MALE CONNECTOR, D-SUB 9P, FEMALE CONNECTOR, D-SUB 9P, FEMALE CONNECTOR, D-SUB 9P, FEMALE CONNECTOR, D-SUB 9P, FEMALE
CN5 CN6 CN787	1-563-770-11 s	CONNECTOR, D-SUB 9P, FEMALE CONNECTOR, D-SUB 9P, FEMALE CONNECTOR, DIN 64P, MALE

CN-788 BOARD used for BKE-2020

Ref. No. or Q'ty	Part No. SP Description
1pc	A-8267-078-A O CN-788 ASSY
2pcs	3-172-089-01 O HANDLE
1pc	3-179-252-12 O PANEL (3, 4), CONNECTOR
14pcs	7-682-903-11 S SCREW +PWH 3X6
2pcs	7-685-546-14 S SCREW +BTP 3X8 TYPE2 N-S
CN1	1-563-323-11 s CONNECTOR, D-SUB 9P, FEMALE
CN2	1-563-323-11 s CONNECTOR, D-SUB 9P, FEMALE
CN3	1-563-323-11 s CONNECTOR, D-SUB 9P, FEMALE
CN4	1-563-323-11 s CONNECTOR, D-SUB 9P, FEMALE
CN5	1-563-323-11 s CONNECTOR, D-SUB 9P, FEMALE
CN6 CN788	1-563-323-11 s CONNECTOR, D-SUB 9P, FEMALE 1-506-747-11 s CONNECTOR, DIN 64P, MALE

CPU-132 DARD Used for REE-2010 CPU-132 DARD Used for REE-2010 Ref. No. or Q'ty Part No. SP Description Ref. No. or Q'ty Part No. or Q'ty Pa		
Dec A-8271-803-A MOUNTED CIECUIT BOARD, CPU-132 Fig. A-8271-803-A Fig. A-8	CPU-132 BOARD used for BKE-2010	(CPU-132 BOARD used for BKE-2010)
200 200	Ref. No. or Q'ty Part No. SP Description	
C1 1-107-077-00 S MICA 47PF 5X 50V 87 1-249-429-11 S CARRON 10X 52 1/4W C2 1-107-077-00 S MICA 47PF 5X 50V 87 1-249-429-11 S CARRON 10X 52 1/4W C3 1-124-903-11 S ELECT 10Z 50V 83 1-249-429-11 S CARRON 10X 52 1/4W C4 1-161-494-00 S CERAMIC 0.022W 25V 810 1-249-421-11 S CARRON 470 5X 1/4W C5 1-124-91-124-13 ELECT 10ZW 50V 810 1-249-421-11 S CARRON 470 5X 1/4W C6 1-128-998-11 S FLEET 20ZW 50V 811 1-249-421-11 S CARRON 470 5X 1/4W C6 1-128-998-11 S FLEET 10ZW 50V 811 1-249-421-11 S CARRON 10X 5X 1/4W C7 1-161-494-00 S CERAMIC 0.022W 25V 813 1-249-417-11 S CARRON 10X 5X 1/4W C7 1-161-379-00 S CERAMIC 0.022W 25V 813 1-249-417-11 S CARRON 10X 5X 1/4W C7 1-161-379-00 S CERAMIC 0.02W 25V 815 1-249-417-11 S CARRON 10X 5X 1/4W 815 1-249-421-11 S CARRON 8.5X 1/4W 815 1-249-421-11 S CARRON 8.5X 1/4W 816 1-249-421-11 S CARRO	1pc 3-180-014-01 o PLATE, SHIELD 1pc 3-180-015-01 o SHEET, INSULATED	R2 1-247-895-00 s CARBON 470K 5% 1/4W R3 1-249-429-11 s CARBON 10K 5% 1/4W
1-124-9-69-11 S. ELECT 2001 20X 50V	BZ1 1-529-025-00 s BUZZER	R6 1-249-429-11 s CARBON 10K 5% 1/4W
C10	C1 1-107-077-00 s MICA 47PF 5% 50V C2 1-107-077-00 s MICA 47PF 5% 50V C3 1-124-903-11 s ELECT 1uF 20% 50V C4 1-161-494-00 s CERAMIC 0.022uF 25V C5 1-124-122-11 s ELECT 100uF 20% 50V	R7 1-249-429-11 S CARBON 10K 5% 1/4W R8 1-249-429-11 S CARBON 10K 5% 1/4W R9 1-249-425-11 S CARBON 4.7K 5% 1/4W R10 1-249-413-11 S CARBON 470 5% 1/4W
1-124-122-11 S CARBON 20X 50V S19 1-249-421-11 S CARBON 2.2X 5X 1/4W	C6 1-126-969-11 S ELECT 220uF 20% 50V C7 1-161-494-00 S CERAMIC 0.022uF 25V C8 1-161-494-00 S CERAMIC 0.022uF 25V C9 1-124-915-11 S ELECT 10uF 20% 63V C10 1-161-379-00 S CERAMIC 0.01uF 20% 25V	K15 1-249-417-11 S CARBON 1K 5% 1/4W
1-161-494-00 CERAMIC 0.022uF 25V 224 1-249-421-11 S CARBON 2.2K 53 1/4W 1-249-421-11 S CA	C12 1-124-122-11 s ELECT 100uF 20% 50V C13 1-161-379-00 s CERAMIC 0.01uF 20% 25V C14 1-162-209-31 s CERAMIC 27PF 5% 50V C101 1-161-494-00 s CERAMIC 0.022uF 25V	R19 1-249-421-11 S CARBON 2.2K 5% 1/4W R20 1-249-421-11 S CARBON 2.2K 5% 1/4W R21 1-249-421-11 S CARBON 2.2K 5% 1/4W
C108	C103 1-161-494-00 s CERAMIC 0.022uF 25V C104 1-161-494-00 s CERAMIC 0.022uF 25V C105 1-161-494-00 s CERAMIC 0.022uF 25V	R24 1-249-421-11 s CARBON 2.2K 5% 1/4W R25 1-249-421-11 s CARBON 2.2K 5% 1/4W R26 1-249-421-11 s CARBON 2.2K 5% 1/4W
FB1	C108 1-161-494-00 s CERAMIC 0.022uF 25V C109 1-161-494-00 s CERAMIC 0.022uF 25V	R28 1-249-421-11 s CARBON 2.2K 5% 1/4W R29 1-249-421-11 s CARBON 2.2K 5% 1/4W R30 1-249-420-11 s CARBON 1.8K 5% 1/4W R31 1-249-420-11 s CARBON 1.8K 5% 1/4W
FB1	CN1 1-566-319-21 s CONNECTOR, D-SUB 15P, MALE CN2 1-564-391-11 o HEADDER 40P, MALE CN3 1-506-487-11 s CONNECTOR 8P, MALE	R32 1-249-420-11 s CARBON 1.8K 5% 1/4W R33 1-249-421-11 s CARBON 2.2K 5% 1/4W R34 1-249-421-11 s CARBON 2.2K 5% 1/4W
FB1	CNI1 1-540-069-11 s SOCKET, IC (IC113) 84P	R35 1-249-421-11 s CARBON 2.2K 5% 1/4W
FB1 1-535-180-00 S BEAD, FERRITE R39 1-249-421-11 S CARBON 2.2K 5% 1/4W FB2 1-535-180-00 S BEAD, FERRITE R40 1-249-421-11 S CARBON 2.2K 5% 1/4W FB3 1-535-180-00 S BEAD, FERRITE R40 1-249-421-11 S CARBON 2.2K 5% 1/4W FB4 1-535-180-00 S BEAD, FERRITE R41 1-249-421-11 S CARBON 2.2K 5% 1/4W FB4 1-535-180-00 S BEAD, FERRITE R41 1-249-421-11 S CARBON 2.2K 5% 1/4W R42 1-249-421-11 S CARBON 2.2K 5% 1/4W R43 1-249-421-11 S CARBON 2.2K 5% 1/4W R44 1-249-420-11 S CARBON 1.8K 5% 1/4W R45 1-249-420-11 S CARBON 1.8K 5% 1/4W R45 1-249-420-11 S CARBON 1.8K 5% 1/4W R46 1-249-420-11 S CARBON 1.8K 5% 1/4W R47 1-249-420-11 S CARBON 1.8K 5% 1/4W R48 1-249-420-11 S CARBON 1.8K 5% 1/4W R49 1-249-420-11 S CARBON 2.2K 5% 1/4W R50 1-249-421-11 S CARBON 2.2K 5% 1/4W R50 1-249-429-11 S CARBON 2.2K 5% 1/4W R50 1-249-429-11 S CARBON 2.2K 5% 1/4W R50 1-249	DD1 1-464-156-00 s CONVERTER, DC-DC CD-02	R37 1-249-421-11 S CARBON 2.2K 5% 1/4W
IC1	FB1 1-535-180-00 s BEAD, FERRITE FB2 1-535-180-00 s BEAD, FERRITE FB3 1-535-180-00 s BEAD, FERRITE	R38 1-249-421-11 s CARBON 2.2K 5% 1/4W R39 1-249-421-11 s CARBON 2.2K 5% 1/4W R40 1-249-421-11 s CARBON 2.2K 5% 1/4W R41 1-249-421-11 s CARBON 2.2K 5% 1/4W
IC6	IC2 8-759-910-43 s IC CX23028 IC3 8-759-995-76 s IC PST529C IC4 8-759-008-57 s IC MC34051P	R43 1-249-425-11 s CARBON 4.7K 5% 1/4W R44 1-249-420-11 s CARBON 1.8K 5% 1/4W R45 1-249-420-11 s CARBON 1.8K 5% 1/4W R46 1-249-420-11 s CARBON 1.8K 5% 1/4W
IC11 8-759-007-09 s IC MC74HC540N IC12 8-759-240-49 s IC TC4049BP R53 1-249-421-11 s CARBON 2.2K 5% 1/4W IC13 8-759-240-49 s IC TC4049BP R54 1-249-421-11 s CARBON 2.2K 5% 1/4W IC14 8-759-630-07 s IC M54513P R55 1-249-429-11 s CARBON 10K 5% 1/4W IC15 8-759-203-05 s IC TC74HC193P R56 1-249-429-11 s CARBON 10K 5% 1/4W L1 1-421-442-00 s COIL, CHOKE RB1 1-231-385-00 s RESISTOR BLOCK 4.7Kx8 RB2 1-231-385-00 s RESISTOR BLOCK 4.7Kx8 RB3 1-231-385-00 s RESISTOR BLOCK 4.7Kx8	IC7 8-759-630-07 s IC M54513P IC8 8-759-630-07 s IC M54513P IC9 8-759-630-07 s IC M54513P	R48 1-249-420-11 s CARBON 1.8K 5% 1/4W R49 1-249-420-11 s CARBON 1.8K 5% 1/4W R50 1-249-421-11 s CARBON 2.2K 5% 1/4W R51 1-249-421-11 s CARBON 2.2K 5% 1/4W
RB2 1-231-385-00 s RESISTOR BLOCK 4.7Kx8 Q1 8-729-140-96 s TRANSISTOR 2SD774-4 RB3 1-231-385-00 s RESISTOR BLOCK 4.7Kx8	IC12 8-759-240-49 s IC TC4049BP IC13 8-759-240-49 s IC TC4049BP IC14 8-759-630-07 s IC M54513P	R53 1-249-421-11 s CARBON 2.2K 5% 1/4W R54 1-249-421-11 s CARBON 2.2K 5% 1/4W R55 1-249-429-11 s CARBON 10K 5% 1/4W
Q1 8-729-140-96 s TRANSISTOR 2SD774-4 RB3 1-231-385-00 s RESISTOR BLOCK 4.7Kx8	L1 1-421-442-00 s COIL, CHOKE	RB1 1-231-385-00 S RESISTOR BLOCK 4.7Kx8
-	Q1 8-729-140-96 s TRANSISTOR 2SD774-4 Q2 8-729-119-78 s TRANSISTOR 2SC2785-HFE	RB3 1-231-385-00 s RESISTOR BLOCK 4.7Kx8

(CPU-132 BOARD used for BKE-2010)

Ref. No. or Q'ty Part No. SP Description

S1 1-570-472-11 s SWITCH, KEYBOARD 1-570-598-11 s SWITCH, DIP 4-CKT

X1 1-567-812-11 s RESONATOR, CERAMIC 12.288MHz

DET-11 BOARD used for BKE-2010

Ref. No. or Q'ty	Part No. SP Description
1pc 1pc 1pc	1-633-840-13 o PRINTED CIRCUIT BOARD, DET-11 2-143-746-02 o HOLDER, DME 7-685-533-14 s SCREW +BTP 2.6X6 TYPE2 N-S
C1 C2 C3 C4	1-163-011-11 s CERAMIC 0.0015uF 10% 50V 1-163-011-11 s CERAMIC 0.0015uF 10% 50V 1-126-154-11 s ELECT 47uF 20% 6.3V 1-163-011-11 s CERAMIC 0.0015uF 10% 50V
CN1	1-506-487-11 s CONNECTOR 8P, MALE
D1	8-719-200-02 s DIODE 10E2
DME1	8-745-001-00 s DM-211A
IC1	8-759-983-74 s IC LM324NS
PC1	8-719-800-81 s PHOTOINTERRUPTER TLP801A
R1 R2 R3 R5 R6	1-216-057-00 s METAL, CHIP 2.2K 5% 1/10W 1-216-057-00 s METAL, CHIP 2.2K 5% 1/10W 1-216-097-00 s METAL, CHIP 100K 5% 1/10W
R7 R8 R9 R10 R11	1-216-057-00 s METAL, CHIP 2.2K 5% 1/10W 1-216-073-00 s METAL, CHIP 10K 5% 1/10W 1-216-105-00 s METAL, CHIP 220K 5% 1/10W 1-216-057-00 s METAL, CHIP 2.2K 5% 1/10W 1-216-057-00 s METAL, CHIP 2.2K 5% 1/10W
R13 R14 R15 R16 R17	1-216-097-00 s METAL, CHIP 100K 5% 1/10W 1-216-057-00 s METAL, CHIP 2.2K 5% 1/10W 1-216-057-00 s METAL, CHIP 2.2K 5% 1/10W 1-216-073-00 s METAL, CHIP 10K 5% 1/10W 1-216-065-00 s METAL, CHIP 4.7K 5% 1/10W
R18	1-216-033-00 s METAL, CHIP 220 5% 1/10W
RV1 RV2	1-228-469-00 s RES, ADJ METAL 200 1-228-469-00 s RES, ADJ METAL 200

 IF-391 BOARD			(IF-391 BOARD)		
Ref. No. or Q'ty	Part No. SP Description	Ref. No.	Part No. SP Description		
1pc	A-8271-805-A o MOUNTED CIRCUIT BOARD, IF-391 2-139-140-01 o PLATE, SHIELD 2-182-909-01 o LEVER, PC BOARD 2-280-622-01 o SUPPORT (M3), HEXAGON 7-626-320-11 s PIN, SPRING 3X8	C60 C61 C62 C63 C64	1-163-037-11 s CERAMIC, CHIP 0.022uF 10% 25V 1-126-401-11 s ELECT, CHIP 1uF 20% 50V 1-163-037-11 s CERAMIC, CHIP 0.022uF 10% 25V 1-126-401-11 s ELECT, CHIP 1uF 20% 50V 1-164-232-11 s CERAMIC 0.01uF 10% 100V		
1pc 1pc 4pcs	7-682-545-04 s SCREW +B 3X4 7-682-903-01 s SCREW +PWH 3X5 7-685-546-14 s SCREW +BTP 3X8 TYPE2 N-S	C65 C66 C70 C71	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-107-079-91 s MICA 56PF 5% 50V 1-107-159-00 s MICA 33PF 5% 500V		
C1 C2 C3 C4 C5	2-280-622-01 o SUPPORT (M3), HEXAGON 7-626-320-11 s PIN, SPRING 3X8 7-682-545-04 s SCREW +B 3X4 7-682-903-01 s SCREW +PWH 3X5 7-685-546-14 s SCREW +BTP 3X8 TYPE2 N-S 1-126-392-11 s ELECT, CHIP 100uf 20% 6.3V 1-164-232-11 s CERAMIC 0.01uf 10% 100V 1-126-397-11 s ELECT, CHIP 33uf 20% 25V 1-164-232-11 s CERAMIC 0.01uf 10% 100V 1-126-391-11 s ELECT, CHIP 47uf 20% 6.3V 1-164-232-11 s CERAMIC 0.01uf 10% 100V 1-126-397-11 s ELECT, CHIP 33uf 20% 25V 1-107-082-91 s MICA 75Pf 5% 50V 1-107-084-91 s MICA 91Pf 5% 50V 1-126-393-11 s ELECT, CHIP 47uf 20% 6.3V 1-126-393-11 s ELECT, CHIP 33uf 20% 25V 1-163-037-11 s CERAMIC, CHIP 0.022uf 10% 25V 1-163-037-11 s CERAMIC, CHIP 100Pf 5% 50V 1-163-251-11 s CERAMIC, CHIP 100Pf 5% 50V	C72 C73 C74 C75 C76	1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-163-133-00 s CERAMIC, CHIP 470PF 5% 50V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-126-397-11 s ELECT, CHIP 33uF 20% 25V		
C6 C7 C8 C9 C10	1-126-391-11 s ELECT, CHIP 47uF 20% 6.3V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-126-397-11 s ELECT, CHIP 33uF 20% 25V 1-107-082-91 s MICA 75PF 5% 50V 1-107-084-91 s MICA 91PF 5% 50V	C77 C78 C79 C201	1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-126-397-11 s ELECT, CHIP 33uF 20% 25V 1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-164-232-11 s CERAMIC 0.01uF 10% 100V		
C11 C12	1-126-391-11 s ELECT, CHIP 47uF 20% 6.3V 1-126-393-11 s ELECT, CHIP 33uF 20% 10V	C202 C203	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V		
C13 C14 C15	1-163-037-11 s CERAMIC, CHIP 0.022uF 10% 25V 1-163-125-00 s CERAMIC, CHIP 220FF 5% 50V 1-163-251-11 s CERAMIC, CHIP 100FF 5% 50V	C204 C205 C206 C207	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V		
C16 C17 C18 C19 C20	1-163-038-00 S CERAMIC, CHIP 0.10F 25V 1-163-038-00 S CERAMIC, CHIP 0.1uF 25V 1-126-402-11 S ELECT, CHIP 2.2uF 20% 50V 1-164-232-11 S CERAMIC 0.01uF 10% 100V 1-163-251-11 S CERAMIC, CHIP 100PF 5% 50V	C208 C209 C210 C211	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V		
C21 C22 C23 C28	1-163-251-11 s CERAMIC, CHIP 100PF 5% 50V 1-163-251-11 s CERAMIC, CHIP 100PF 5% 50V 1-163-251-11 s CERAMIC, CHIP 100PF 5% 50V 1-163-251-11 s CERAMIC, CHIP 100PF 5% 50V	C212 C213 C214 C215	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V		
C29 C30	1-163-251-11 s CERAMIC, CHIP 100PF 5% 50V 1-163-251-11 s CERAMIC, CHIP 100PF 5% 50V	C216 C217 C218	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V		
C31 C32 C33 C34	1-163-251-11 S CERAMIC, CHIP 100PF 52 50V 1-163-251-11 S CERAMIC, CHIP 100PF 52 50V 1-163-251-11 S CERAMIC, CHIP 100PF 52 50V 1-163-251-11 S CERAMIC, CHIP 100PF 52 50V	C219 C220 C221 C222	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V		
C40 C41 C42	1-164-232-11 S CERAMIC 0.01uF 10% 100V 1-164-232-11 S CERAMIC 0.01uF 10% 100V 1-164-232-11 S CERAMIC 0.01uF 10% 100V	C224 C225	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V		
C43 C44 C45	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-126-401-11 s ELECT, CHIP 1uF 20% 50V 1-126-401-11 s ELECT, CHIP 1uF 20% 50V	C226 C227 C228	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V		
C45 C46 C47 C48	1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-126-394-11 s ELECT, CHIP 10uF 20% 16V	C229 C230 C231 C232	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V		
C49 C50 C51 C52 C53	1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	C233 C234 C235 C236	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V		
C54 C55	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	C237 C238	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V		
C56 C58 C59	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	C239 C240 C241 C242	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V		

(IF-391 BOARD)	(IF-391 BOARD)				
Ref. No. or Q'ty Part No. SP Description Ref. No. SP Description SP Description					
C243 1-164-232-11 S CERAMIC 0.01uF 10% 100V C244 1-164-232-11 S CERAMIC 0.01uF 10% 100V C245 1-164-232-11 S CERAMIC 0.01uF 10% 100V C246 1-164-232-11 S CERAMIC 0.01uF 10% 100V C247 1-164-232-11 S CERAMIC 0.01uF 10% 100V	IC7 8-759-925-90 s IC SN74HC74NS IC8 8-759-972-26 s IC LM1881N IC9 8-759-925-76 s IC SN74HC08NS IC10 8-759-926-18 s IC SN74HC157ANS IC11 8-759-926-18 s IC SN74HC157ANS				
C248 1-164-232-11 S CERAMIC 0.01uF 10% 100V C249 1-164-232-11 S CERAMIC 0.01uF 10% 100V C250 1-164-232-11 S CERAMIC 0.01uF 10% 100V C251 1-164-232-11 S CERAMIC 0.01uF 10% 100V C252 1-164-232-11 S CERAMIC 0.01uF 10% 100V					
C253 1-164-232-11 s CERAMIC 0.01uF 10% 100V C254 1-164-232-11 s CERAMIC 0.01uF 10% 100V C255 1-164-232-11 s CERAMIC 0.01uF 10% 100V C256 1-164-232-11 s CERAMIC 0.01uF 10% 100V C257 1-164-232-11 s CERAMIC 0.01uF 10% 100V	IC17 8-759-938-68 s IC CXD1095Q IC18 8-795-926-80 s IC SN74HC573BNS IC19 8-795-926-80 s IC SN74HC573BNS IC20 8-759-941-17 s IC SN74LS06NS IC21 8-759-941-17 s IC SN74LS06NS				
C258 1-164-232-11 s CERAMIC 0.01uF 10% 100V C259 1-164-232-11 s CERAMIC 0.01uF 10% 100V C260 1-164-232-11 s CERAMIC 0.01uF 10% 100V C261 1-164-232-11 s CERAMIC 0.01uF 10% 100V C262 1-164-232-11 s CERAMIC 0.01uF 10% 100V	IC22 8-759-941-17 s IC SN74LS06NS IC23 8-759-941-17 s IC SN74LS06NS IC24 8-759-941-17 s IC SN74LS06NS IC25 8-759-973-43 s IC MB8421-90LPFQ IC26 8-759-973-43 s IC MB8421-90LPFQ				
C263 1-164-232-11 s CERAMIC 0.01uF 10% 100V CN100 1-506-747-11 s CONNECTOR, DIN 64P, MALE CN101 1-506-748-11 s CONNECTOR, DIN 96P, MALE CN103 1-506-473-11 s CONNECTOR 8P, MALE	IC27				
CN104 1-506-473-11 s CONNECTOR 8P, MALE CN105 1-506-467-11 s CONNECTOR 2P, MALE CN127 1-540-069-11 s SOCKET, IC (IC113) 84P CN128 1-540-069-11 s SOCKET, IC (IC113) 84P CN139 1-526-659-00 o SOCKET, IC 28P	IC32 8-759-923-64 s IC AM26LS32ACNS IC33 8-759-923-65 s IC AM26LS31CNS IC34 8-759-925-76 s IC SN74HC08NS IC35 8-759-925-76 s IC SN74HC08NS IC36 8-759-973-43 s IC MB8421-90LPFQ				
COP3 1-562-579-21 s PLUG, SHORTING COP5 1-562-579-21 s PLUG, SHORTING COP7 1-562-579-21 s PLUG, SHORTING COP9 1-562-579-21 s PLUG, SHORTING	IC37 8-759-323-67 s IC HD641180XF6 IC38 8-759-926-11 s IC SN74HC138NS IC39 —PENDING—— s IC TM527C256-20JL, EPROM, BLANK IC40 8-752-331-00 s IC CXX5864PM-12L IC41 8-759-926-11 s IC SN74HC138NS				
COR3 1-564-952-21 s PIN, DIL 16P COR5 1-564-952-21 s PIN, DIL 16P COR7 1-564-952-21 s PIN, DIL 16P COR9 1-564-952-21 s PIN, DIL 16P	IC42 8-759-065-85 s IC MAX232CPE IC43 8-759-995-64 s IC MB86023 IC44 8-759-995-64 s IC MB86023 IC45 8-759-908-92 s IC TL084CNS				
D1 8-719-812-43 s LED TLG124A, GRN D2 8-719-812-44 s LED TLG124, ORG D3 8-719-812-43 s LED TLG124A, GRN D4 8-719-812-44 s LED TLG124A, GRN D5 8-719-812-44 s LED TLG124A, GRN	IC46 8-759-908-92 s IC TL084CNS IC47 8-759-908-92 s IC TL084CNS IC48 8-759-908-92 s IC TL084CNS IC49 8-759-923-64 s IC AM26LS32ACNS IC50 8-759-923-65 s IC AM26LS31CNS				
D6 8-719-812-44 s LED TLO124, ORG D7 8-719-911-19 s DIODE 1SS119 D8 8-719-911-19 s DIODE 1SS119 D9 8-719-911-19 s DIODE 1SS119 D10 8-719-911-19 s DIODE 1SS119	IC51 8-759-925-74 s IC TC74HC04NS IC52 8-759-926-56 s IC SN74HC273NS IC53 8-759-941-17 s IC SN74LS06NS IC54 8-759-700-65 s IC NJM79L05A				
D11 8-719-911-19 s DIODE 1SS119 D12 8-719-911-19 s DIODE 1SS119 D13 8-719-911-19 s DIODE 1SS119 D14 8-719-911-19 s DIODE 1SS119 D15 8-719-911-19 s DIODE 1SS119	IC56 8-759-926-77 s IC SN74HC541NS IC58 8-759-925-85 s IC SN74HC32NS IC59 8-759-925-90 s IC SN74HC74NS IC60 8-759-239-23 s IC TC74HC86AF				
IC2 8-759-927-46 s IC SN74HC00NS IC3 8-759-906-43 s IC SM6430C	IC61 8-759-982-25 s IC RC78L09A IC62 8-759-700-68 s IC NJM79L09A				
1C4 8-759-925-74 s IC TC74HC04NS 1C5 8-759-927-29 s IC SN74HCU04NS 1C6 8-759-925-90 s IC SN74HC74NS	IC65 8-759-009-10 s IC MC14069UBF PS1 A1-532-686-00 s LINK, IC 2.7A PS2 A1-532-675-00 s LINK, IC 1.5A				

(SY-184)	BOARD)	(SY-184)	BOARD)	
Ref. No. or Q'ty	Part No. SP Description	Ref. No. or Q'ty	Part No. SP Description	
C208 C209	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	IC1	8-759-242-61 s IC TMP68301F	
C210 C211 C212	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	IC2 IC3 IC4	8-759-323-02 s IC HM628128LFP-10 8-759-323-02 s IC HM628128LFP-10 8-759-323-02 s IC HM628128LFP-10	
C220	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	IC5 IC9	8-759-323-02 s IC HM628128LFP-10 PENDING s IC M27C4002-12F1, EPRO	M, BLANK
C222 C223 C224	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	IC10 IC13	PENDING s IC M27C4002-12F1, EPRO 8-759-073-39 s IC X2816CP-20	M, BLANK
C225 C226	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	IC14 IC15 IC16	8-759-926-24 s IC SN74HC164NS 8-759-934-27 s IC SN74ALS138NS 8-759-925-76 s IC SN74HC08NS	
C227 C228	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	IC17 IC18	8-759-926-49 s IC SN74HC245NS 8-759-926-49 s IC SN74HC245NS	
C229 C300	1-164-232-11 s CERAMIC 0.01uF 10% 100V	IC19 IC20	8-759-926-77 s IC SN74HC541NS 8-759-926-77 s IC SN74HC541NS	
C301 C302 C303	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	IC21 IC22	8-759-926-77 s IC SN74HC541NS 8-759-926-11 s IC SN74HC138NS	
C304 C305	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	IC23 IC24 IC25	8-759-934-27 s IC SN74ALS138NS 8-759-995-76 s IC PST529C 8-759-971-15 s IC PST529H	
C307 C308	1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-126-394-11 s ELECT, CHIP 10uF 20% 16V	IC26	8-759-987-92 s IC SN74ALS10ANS 8-759-987-92 s IC SN74ALS10ANS	
C309 C314 C315	1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-163-017-00 s CERAMIC, CHIP 0.0047uF 5% 50V 1-163-017-00 s CERAMIC, CHIP 0.0047uF 5% 50V	IC28 IC29	8-759-934-11 s IC SN74ALS32NS 8-759-925-85 s IC SN74HC32NS	
C316 C317	1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-126-394-11 s ELECT, CHIP 10uF 20% 16V	IC30 IC31	8-759-927-46 s IC SN74HC00NS 8-759-925-76 s IC SN74HC08NS	
C320 C402 C404	1-126-394-11 s ELECT, CHIP 10uF 20% 16V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	IC32 IC33 IC34	8-759-933-98 s IC SN74ALSO8NS 8-759-933-92 s IC SN74ALSO0ANS 8-759-925-75 s IC SN74HCO5NS	
C408	1-164-232-11 s CERAMIC 0.01uF 10% 100V	IC35 IC36	8-759-946-65 s IC SN74ALSO4BNS 8-759-927-00 s IC SN74HC4078ANS	
C411 C412 C413	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	IC37 IC38	8-759-925-74 s IC TC74HC04NS 8-759-925-74 s IC TC74HC04NS	
C414 C415	1-164-232-11 s CERAMIC 0.01uF 10% 100V 1-164-232-11 s CERAMIC 0.01uF 10% 100V	IC39 IC40 IC41	8-759-926-64 s IC SN74HC367ANS 8-795-926-80 s IC SN74HC573BNS 8-795-926-80 s IC SN74HC573BNS	
CN100	1-506-747-11 s CONNECTOR, DIN 64P, MALE 1-506-747-11 s CONNECTOR, DIN 64P, MALE	IC42 IC43	8-759-926-64 s IC SN74HC367ANS 8-759-926-24 s IC SN74HC164NS	
CN101 CNI1	1-526-862-21 o SOCKET, IC 64P	IC44 IC45	8-759-145-92 s IC UPD71071GC-3B6 8-759-321-82 s IC HD63265FP	
CNI9 CNI10 CNI121	1-526-662-21 o SOCKET, IC (DP) 40P 1-526-662-21 o SOCKET, IC (DP) 40P 1-526-659-00 o SOCKET, IC 28P	IC46 IC47	8-759-149-09 s IC UPD71059GB-10-3B4 8-759-149-07 s IC UPD71054GB-10-3B4	
CNI204	1-526-662-21 o SOCKET, IC (DP) 40P 1-526-662-21 o SOCKET, IC (DP) 40P	IC48 IC49 IC50	8-759-149-07 s IC UPD71054GB-10-3B4 8-759-926-49 s IC SN74HC245NS 8-759-926-49 s IC SN74HC245NS	
CNI 205 COR1	1-564-952-21 s PIN, DIL 16P	IC51	8-759-926-82 s IC SN74HC574ANS	
D1 D2	8-719-982-04 s DIODE ERB81-004 8-719-911-19 s DIODE 1SS119	IC52 IC53 IC54	8-759-926-77 s IC SN74HC541NS 8-759-927-17 s IC SN74HCT540NS 8-759-926-12 s IC SN74HC139NS	
D3 D4	8-719-982-04 s DIODE ERB81-004 8-719-982-04 s DIODE ERB81-004	IC55 IC56	8-759-926-11 s IC SN74HC138NS 8-759-926-11 s IC SN74HC138NS	
D12 D13	8-719-911-19 s DIODE 1SS119 8-719-911-19 s DIODE 1SS119	IC58 IC59	8-759-926-24 s IC SN74HC164NS 8-759-978-04 s IC RF5C15	
D14 D310 D311	8-719-911-19 s DIODE 1SS119 8-719-123-78 s DIODE 1SS97-2 8-719-123-78 s DIODE 1SS97-2	IC60 IC61 IC62	8-759-941-17 s IC SN74LS06NS 8-759-941-17 s IC SN74LS06NS 8-759-925-74 s IC TC74HC04NS	
D312	8-719-123-78 s DIODE 1SS97-2 8-719-123-78 s DIODE 1SS97-2	IC63 IC64	8-759-925-74 s IC TC74HC04NS 8-759-925-74 s IC TC74HC04NS	
D313	0-112-179-10 P TOD91-7	1004	O 100 000 13 D TO TOLIMOUTHO	

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(SY-184 BOARD)
                                                                                                                                                                          (SY-184 BOARD)
Ref. No. or Q'ty Part No.
                                                                                                                                                                         Ref. No. or Q'ty Part No.
                                                          SP Description
                                                                                                                                                                                                                                SP Description
                        8-759-925-74 s IC TC74HC04NS
8-759-925-78 s IC SN74HC10NS
8-759-925-85 s IC SN74HC32NS
8-759-925-85 s IC SN74HC32NS
8-759-925-76 s IC SN74HC32NS
                                                                                                                                                                                                 8-759-925-79 s IC SN74HC11ANS
8-759-925-81 s IC SN74HC20ANS
IC65
                                                                                                                                                                          IC315
IC66
 IC67
IC68
                                                                                                                                                                         L1
                                                                                                                                                                                                  1-408-425-00 s INDUCTOR 220uH
IC69
                                                                                                                                                                                            1-532-686-00 s LINK, IC 2.7A 1-532-686-00 s LINK, IC 2.7A
                        8-759-925-76 s IC SN74HC08NS
8-759-925-72 s IC SN74HC02NS
8-759-927-46 s IC SN74HC00NS
8-759-925-90 s IC SN74HC74NS
8-759-065-85 s IC MAX232CPE
IC70
                                                                                                                                                                                                  8-729-119-79 s TRANSISTOR 2SC2785-FEK
                                                                                                                                                                          Q3
IC71
IC72
                                                                                                                                                                                                 1-216-611-11 s METAL, CHIP 22 0.5% 1/10W 1-216-643-11 s METAL, CHIP 470 0.5% 1/10W 1-216-643-11 s METAL, CHIP 470 0.5% 1/10W 1-216-657-11 s METAL, CHIP 1.8K 0.5% 1/10W 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W
                                                                                                                                                                          R18
 IC73
 IC75
                                                                                                                                                                          R19
                                                                                                                                                                          R21
                        8-759-926-77 s IC SN74HC541NS
8-759-926-37 s IC SN74HC193NS
8-759-980-27 s IC SN74ALS163BNS
8-759-926-29 s IC SN74HC175NS
8-759-925-90 s IC SN74HC74NS
IC77
                                                                                                                                                                          R22
IC78
IC83
                                                                                                                                                                                                 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W 1-216-699-11 s METAL, CHIP 100K 0.5% 1/10W 1-216-691-11 s METAL, CHIP 47K 0.5% 1/10W 1-218-776-11 s METAL, CHIP 1M 0.5% 1/10W 1-216-635-11 s METAL, CHIP 220 0.5% 1/10W
                                                                                                                                                                          R27
 IC89
                                                                                                                                                                          R28
 IC92
                                                                                                                                                                          R36
                        8-759-933-98 s IC SN74ALSO8NS
8-759-925-80 s IC SN74HC14NS
8-759-925-85 s IC SN74HC32NS
8-759-926-99 s IC SN74HC4075NS
8-759-927-29 s IC SN74HCU04NS
 IC93
                                                                                                                                                                          R46
 IC97
                                                                                                                                                                          R47
 IC99
IC100
                                                                                                                                                                                                 1-216-635-11 s METAL, CHIP 220 0.5% 1/10W 1-216-628-11 s METAL, CHIP 110 0.5% 1/10W 1-216-628-11 s METAL, CHIP 110 0.5% 1/10W 1-216-643-11 s METAL, CHIP 470 0.5% 1/10W 1-216-643-11 s METAL, CHIP 470 0.5% 1/10W
                                                                                                                                                                          R67
                                                                                                                                                                          R68
 IC101
                                                                                                                                                                          R69
                         8-759-925-74 s IC TC74HC04NS
8-759-520-59 s IC MB89322APFQ
8-759-926-74 s IC SN74HC393NS
8-759-939-92 s IC SN74ALS541NS
8-759-939-92 s IC SN74ALS541NS
                                                                                                                                                                          R315
 IC103
                                                                                                                                                                          R316
 IC104
                                                                                                                                                                                                 1\text{--}216\text{--}643\text{--}11 s METAL, CHIP 470 0.5% 1/10W 1-216-643-11 s METAL, CHIP 470 0.5% 1/10W 1-216-691-11 s METAL, CHIP 47K 0.5% 1/10W
 IC105
                                                                                                                                                                          R317
                                                                                                                                                                          R318
 IC106
                                                                                                                                                                          R322
                         8-759-244-85 s IC TC74AC574F
 IC107
                                                                                                                                                                                                 1-231-385-00 s RESISTOR BLOCK 4.7Kx8
                                                                                                                                                                          RB1
  IC108
                                                                                                                                                                          RB2
  IC109
  IC110
                                                                                                                                                                          RB3
  IC111
                                                                                                                                                                          RB4
                                                                                                                                                                          RB5
                                                                                                                                                                                                  1-231-385-00 s RESISTOR BLOCK 4.7Kx8
                         8-759-244-85 s IC TC74AC574F
8-752-331-00 s IC CXK5864BM-12L
8-752-331-00 s IC CXK5864BM-12L
8-752-331-00 s IC CXK5864BM-12L
8-752-331-00 s IC CXK5864BM-12L
 IC112
                                                                                                                                                                                                 1-231-385-00 s RESISTOR BLOCK 4.7Kx8
                                                                                                                                                                          RB6
  IC113
                                                                                                                                                                          RB7
  IC114
                                                                                                                                                                          RB8
  IC115
  IC116
                                                                                                                                                                          RB9
                                                                                                                                                                                                  1-231-405-00 s RESISTOR BLOCK 1Kx8
                                                                                                                                                                          RB10
                         8-759-985-36 s IC 74AC157SJ
8-759-985-36 s IC 74AC157SJ
8-759-985-36 s IC 74AC157SJ
8-759-926-26 s IC SN74HC166NS
8-759-748-97 s IC TMS27C512-15JL
  IC117
                                                                                                                                                                          RB11
                                                                                                                                                                                                  1-231-410-00 s RESISTOR BLOCK 10Kx8
  IC118
                                                                                                                                                                                                 1-231-385-00 s RESISTOR BLOCK 4.7Kx8
1-231-385-00 s RESISTOR BLOCK 4.7Kx8
1-231-385-00 s RESISTOR BLOCK 4.7Kx8
                                                                                                                                                                          RB12
  IC119
                                                                                                                                                                          RB13
  IC120
                                                                                                                                                                          RB14
  IC121
                         8-759-925-76 s IC SN74HC08NS
8-759-925-85 s IC SN74HC32NS
8-759-927-02 s IC SN74HC7266NS
8-759-925-74 s IC TC74HC04NS
8-759-925-90 s IC SN74HC74NS
                                                                                                                                                                                                 1-570-472-11 s SWITCH, KEYBOARD
1-571-967-11 s SWITCH, DIP 8-CKT
1-570-598-11 s SWITCH, DIP 4-CKT
                                                                                                                                                                          S2
  IC122
  IC123
                                                                                                                                                                          S<sub>5</sub>
  IC124
  IC125
                                                                                                                                                                                                 1-579-115-11 s OSC, CRYSTAL 24.000MHz
1-577-382-11 s VCO, CRYSTAL 16.000MHz
1-567-866-11 s CRYSTAL, 14.31818MHz
1-567-098-00 s CRYSTAL 32.76800MHz
                                                                                                                                                                          X1
  IC126
                                                                                                                                                                          X2
                         8-759-925-90 s IC SN74HC74NS
8-759-925-78 s IC SN74HC10NS
8-759-925-76 s IC SN74HC08NS
8-759-323-02 s IC HM628128LFP-10
8-759-323-02 s IC HM628128LFP-10
  IC128
  IC129
  IC200
  IC201
  IC202
                          8-759-323-02 s IC HM628128LFP-10
                         8-759-323-02 S IC HM628128LFP-10
8-759-925-78 S IC SN74HC10NS
8-759-926-77 S IC SN74HC541NS
8-759-009-03 S IC MC14049UBF
 IC203
IC302
  IC304
  IC308
                         8-759-065-85 s IC MAX232CPE
8-759-923-64 s IC AM26LS32ACNS
8-759-923-65 s IC AM26LS31CNS
  IC309
  IC311
  IC312
                         8-759-925-79 s IC SN74HC11ANS
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FRAME
Ref. No. or Q'ty Part No.
                                   SP Description
             ↑1-413-647-11 s REGULATOR, SWITCHING

↑1-532-827-11 s FUSE (MT4-3A-N1)

1-951-204-12 o HARNESS, SUB (FDCC)

(CN2/MB-454 board to

CN101/3.5 FDD)
1pc
1pc
1pc
                1-951-235-11 o HARNESS, SUB (KYFLAT)
(CN1/KY-236 board to
CN2/CPU-132 board)
1pc
HARNESS AC IN (For BVE-2000):
(AC SW to CP1/SW REG)
             ↑1-750-171-11 o HOUSING 2P

↑1-569-595-11 o CONTACT, MALE AWG18-24

↑1-570-117-41 s SWITCH, ROCKER (AC POWER)

4-378-344-01 o COVER, SWITCH
  CP1F
  1pc
  1pc
 HARNESS DC OUT (For BVE-2000):
 (CN3/MB-454 board CP51/SW REG)
CN3F 1-561-516-00 o HOUSING, ILG 4P
1pc 1-560-372-00 o CONTACT, ILG, FEMALE AWG22-28
  CP51F
                 1-535-243-21 o CONTACT, FEMALE AWG22-28
 (CN4/MB-454 board CP52/SW REG)
CN4F 1-561-516-00 o HOUSING, ILG 4P
1pcb 1-560-372-00 o CONTACT, ILG, FEMALE AWG22-28
  CP52F
                 1-535-243-21 o CONTACT, FEMALE AWG22-28
 (CN5/MB-454 board CP53/SW REG)
CN5F 1-561-516-00 o HOUSING, ILG 4P
1pc 1-560-372-00 o CONTACT, ILG, FEMALE AWG22-28
  CP53F
                 1-535-243-21 o CONTACT, FEMALE AWG22-28
 HARNESS FDC DC (For BVE-2000):
 (CN1/SY-184 board to CN103/3.5 FDD UNIT)
CNIF 1-535-243-21 o CONTACT, FEMALE AWG22-28
CN103F 1-560-066-00 o CONNECTOR 10P, MALE
 HARNESS LED DC (For BVE-2000):
 (CN6F/SY-184 board to CN1/LE-55 board)
CN6F 1-569-196-31 o HOUSING 3P
1pc 1-569-193-11 o CONTACT, FEMALE
                1-569-196-31 o HOUSING 3P
1-569-193-11 o CONTACT, FEMALE
  CN1F
  1pc
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(FRAME)
Ref. No. or Q'ty Part No.
                                  SP Description
                1-569-195-11 o HOUSING, 2P
1-569-193-11 o CONTACT, FEMALE
 CN105F
HARNESS DIALC (for BKE-2010):
(CN1/DET-11 board to CN3/CPU-132 board)
CN1F 1-569-201-11 o HOUSING, CONNECTOR 8P
1pc 1-569-193-11 o CONTACT, FEMALE
                1-569-201-11 o HOUSING, CONNECTOR 8P
1-569-193-11 o CONTACT, FEMALE
  CN3F
  1pc
HARNESS KYG1 (For BKE-2010):
HARNESS KYG2 (For BKE-2010):
(CPU-132 board to Frame Ground)
  Unstock Parts.
HARNESS CFIF1 (For BKE-2030/2031 and BVE-2000):
  *This harness is supplied to BKE-2030/2031.
(CN103/IF-391 board to CN103/CF-46 board)
(CN103/IF-391 board to CN103/CF-47 board)

CN103F 1-569-201-11 o HOUSING, CONNECTOR 8P

1pc 1-569-193-21 o CONTACT, MALE AWG24-30
HARNESS CFIF2 (For BKE-2030/2031 and BVE-2000): *This harness is supplied to BKE-2030/20311.
(CN104/IF-391 board to CN104/CF-46 board)
(CN104/IF-391 board to CN104/CF-47 board)
CN104F 1-569-201-11 o HOUSING, CONNECTOR 8P
1pc 1-569-193-21 o CONTACT, MALE AWG24-30
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HARNESS BNC REF (For BVE-2000 J only)

(CN7/MB-454 board to CN105/IF-391 board) CN7F 1-569-195-11 o HOUSING, 2P 1pc 1-569-193-11 o CONTACT, FEMALE

5-4. OPTIONAL FIXTURES

OPTIONAL FIXTURES

J-6035-070-A o PLCC IC EXTRACTION TOOL J-6187-390-A o EXTENSION BOARD EX-383

PACKING MATERIALS & SUPPLIED ACCESSORIES

Ref. No. or Q'ty Part No.

SP Description

BVE-2000(J)

1-534-754-00 s CORD POWER, 2P 1-564-747-11 o CONNECTOR, D-SUB 25P, MALE 2-990-242-01 s HOLDER (B), PLUG 3-701-634-00 o BAG, POLYETHYLENE 1pc 1pc 1pc

3pcs

BVE-2000(UC)

1-557-377-11 s CORD, POWER 1-564-747-11 o CONNECTOR, D-SUB 25P, MALE 2-990-242-01 s HOLDER (B), PLUG 3-701-634-00 o BAG, POLYETHYLENE 1pc 1pc 1pc 4pcs

BVE-2000(EK)

1pc

1pc

1-564-747-11 o CONNECTOR, D-SUB 25P, MALE 1-590-910-11 s CORD, POWER 3P 3-170-078-01 o HOLDER (B), PLUG 3-701-634-00 o BAG, POLYETHYLENE 1pc 5pcs

BKE-2010

1-559-650-11 s CABLE, D-SUB 15P 10m 3-701-634-00 o BAG, POLYETHYLENE 3-701-639-00 o BAG, POLYETHYLENE 1pc

2pcs 1pc

BKE-2020

1pc 3-701-629-00 o BAG, POLYETHYLENE

BKE-2030/2031 4pcs 7-682-545-04 s SCREW +B 3X4